West Virginia

FOREWORD.

The wide-awake up-to-date teacher realizes that the work of the school is being rapidly expanded and adjusted to fit modern life and conditions. The teacher who is unwilling to take on this new spirit is sure to be left in the rear in the march of progress. Among these new educational movements is the one looking to the conservation of our forests and useful animals. Therefore, the Arbor Day and the work it suggests are in accord with the best ideas as to the real service which the modern school should render to the community.

I sincerely trust that the teachers of West Virginia will keep the spirit of Arbor Day in the schools throughout the entire year, yet it is necessary in educational affairs, as well as in the religious world, to have seasons of revival. Special days are based upon such a belief, and the teacher should seize these opportunities to reach the high water mark in enthusiasm for such causes.. Any teacher or pupil will find ample suggestions in the pages which follow to arouse his interest and increase his knowledge concerning the trees and birds of our State. This manual should be supplemented by the study of the many nature lessons found in the different series of readers, in the agricultural texts, geographies, histories and the great book of nature which lies open to all who wish to read. The Governor's letter sets forth the main purpose of Arbor and Bird Day, hence it is not necessary for me to try to add to what he has so well said.

Acknowledgment is due Miss Mary Jane Eaton, Supervisor of drawing in Bluefield Public Schools for assistance in preparing the decorations; to Julian Wright who made the original drawing for the artistic cover design; and to other members of the Bluefield Public School for material submitted.

Very truly yours,

M. P. Shawkey

State Superintendent of Schools.

Charleston, West Virginia,
March 1, 1912.

William E. Glasscock, Governor.

A LETTER FROM THE GOVERNOR

February 15, 1912.

To the School Children of West Virginia:

My Dear Boys and Girls:—

By the time my letter reaches you, the earth will be alive with the awakening roots of grass, flowers and trees; here and there the ambitious early flowers will be peeping above the ground, even while winter leaves its last sign in the snow by the fence. The birds among the swelling buds of the shrubs and trees will be singing their songs of joy over the return of spring. My object in writing to you is to call your attention to the usefulness and joyousness of nature and to ask you to do something to encourage and protect the birds and trees of our state.

West Virginia is one of the best states in the Union for boys and girls. We have everywhere sparkling streams abounding with fish. We have flowers of every hue and odor. We have forests dark and wide, full of interesting animals. We have birds of every color and song. We have wild berries and nuts in great variety and abundance. Within reach of your school and your home you have what the children of many other states and cities long to enjoy. I am sure when you remember these things that you will be glad to sing,

> "I love thy rocks and rills,
> Thy woods and templed hills."

But the fact that you have all of these things makes it your duty to help protect them for the boys and girls who will come after you. You should study about our birds and observe them. When you find out how useful they are in protecting our grain and fruit, and when you note the beauty of their song and color, you will become their friend. As a friend you will help them by feeding them in severe weather, by putting up some bird boxes, by protecting them against their enemies, and best of all, by making them welcome about your school, your home, your gardens, your orchards and your fields.

For the same reason I ask you to learn all you can about our

trees. Read what you find in your books and the Arbor Day Manual about the uses of trees and then go to the forests and study them. By all means help plant some trees and help care for the ones which you already have, for when you plant or care for a tree you are working for the future, and that is the highest kind of service.

Hoping you will do much for our friends, the birds and trees, I am,

Very sincerely yours,

Mrs. E. Gleason

ARBOR DAY GEMS.

The robin, the forerunner of the Spring,
The bluebird with his jocund caroling,
The restless swallows building in the eaves,
The golden buttercups, the grass, the leaves,
The lilacs tossing in the winds of May,
All welcome this majestic holiday.

—*Longfellow.*

"A haze on the far horizon
  The infinite, tender sky;
The ripe, rich tint of the corn-fields,
  And the wild geese sailing high;
And all over upland and lowland
  The charm of the goldenrod,—
Some of us call it Autumn,
  And others call it God."

One impulse from a vernal wood
  May teach you more of man,
Of moral evil and of good,
  Than all the sages can.

—*Wordsworth.*

A true forest is not merely a storehouse full of wood, but, as it were, a factory of wood, and at the same time a reservoir of water.

When you help to preserve our forests or to plant new ones you are acting the part of good citizens.—*Theodore Roosevelt.*

There is a pleasure in the pathless woods,
There is a rapture on the lonely shore,
There is society where none intrudes,
By the deep sea, and music in its roar:
I love not Man the less, but Nature more.

—*Byron.*

In fact, there's nothing that keeps its youth,
So far as I know, but a tree and truth.

—*Holmes.*

He that planteth a tree is a servant of God;
He provideth a kindness for many generations,
And faces that he hath not seen shall bless him.

—*Henry Van Dyke.*

To own a bit of ground, to scratch it with a hoe, to plant seeds and watch their renewal of life—this is the commonest delight of the race, the most satisfactory thing one can do.—*Charles Dudley Warner.*

There isn't a blossom under our feet
But has some teaching, short and sweet,
  That is richly worth the knowing;
And the roughest hedge, and the sharpest thorn,
Is blest with a power to guard or warn,
  If we but heed its showing.

—*Phoebe Cary.*

A light broke in upon my soul—
  It was the carol of a bird;
It ceased—and then it came again.
  The sweetest song ear ever heard.

—*Byron.*

Nature never did betray
The heart that loved her. 'Tis her privilege
Through all the years of this one life, to lead
From joy to joy; for she can so inform
The mind that is within us.

—*Wordsworth.*

We have a secret, just we three,
The robin and I and the sweet cherry tree.
The bird told the tree and the tree told me,
And nobody knows it but just us three.

The year's at the spring,
The day's at the morn,
The morn's at seven,
The hill-side's dew-pearled,
The lark's on the wing,
The snail's on the thorn,
God's in his heaven,
All's right with the world.—*Browning.*

O for a seat in some poetic nook,
Just hid with trees and sparkling with a brook!

—*Leigh Hunt.*

And Nature, the old nurse, took
  The child upon her knee,
Saying: "Here is a story book
  Thy Father has written for thee."
"Come wander with me" she said,
  "Into regions yet untrod;
And read what is still unread
  In the manuscripts of God."—*Longfellow.*

Courtesy Georgia Arbor Day.

AN IDEAL LOCATION FOR A SCHOOL HOUSE.

Courtesy Illinois Arbor and Bird Day.

PLENTY OF ROOM TO PLAY.

We will have these in West Virginia.

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https://archive.org/details/arborbirddaymanu00west

We may shut our eyes but we cannot help knowing
That the skies are blue and the grass is growing;
The breeze comes whispering in our ear,
That dandelions are blossoming near,
That maize has sprouted, that streams are flowing,
That the river is bluer than the sky,
That the robin is plastering his house hard by.

—*Lowell.*

APPROPRIATE SCRIPTURE READINGS.

Matthew XIII:1-9.

The same day went Jesus out of the house, and sat by the seaside.

2. And great mulitudes were gathered together unto him, so that he went into a ship, and sat; and the whole multitude stood on the shore.

3. And he spake many things unto them in parables, saying, Behold, a sower went forth to sow;

4. And when he sowed, some seeds fell by the way side, and the fowls came and devoured them up:

5. Some fell upon stony places, where they had not much earth; and forthwith they sprung up, because they had no deepness of earth:

6. And when the sun was up, they were scorched; and because they had no root, they withered away.

7. And some fell among thorns; and the thorns sprung up, and choked them:

8. But other fell into good ground, and brought forth fruit, some a hundredfold, some sixtyfold, and some thirtyfold.

9. Who hath ears to hear, let him hear.

Psalm VIII.

O Lord, our Lord, how excellent is thy name in all the earth, who hast set thy glory above the heavens.

2. Out of the mouth of babes and sucklings hast thou ordained strength because of thine enimies, that thou mightest still the enemy and the avenger.

3. When I consider thy heavens, the work of thy fingers, the moon and the stars, which thou hast ordained;

4. What is man, that thou art mindful of him? and the son of man, that thou visitest him?

5. For thou hast made him a little lower than the angels, and hast crowned him with glory and honour.

6. Thou madest him to have dominion over the works of thy hands; thou hast put all things under his feet:

7. All sheep and oxen, yea, and the beasts of the field;

8. The fowl of the air, and the fish of the sea, and whatsoever passeth through the paths of the seas.

9. O Lord our Lord, how excellent is thy name in all the earth!

A SONG OF SPRING—Solomon II—11:13.

For, lo, the winter is past, the rain is over and gone;

12. The flowers appear on the earth; the time of the singing of birds is come, and the voice of the turtle is heard in our land;

13. The fig tree putteth forth her green figs, and the vines with the tender grape give a good smell. Arise, my love, my fair one, and come away.

RESPONSIVE READING.

Teacher—I will plant in the wilderness the cedar tree, and the myrtle, and the olive tree; I will set in the desert the fir tree, and the pine and the box tree together.

Pupils—They shall spring up as among the grass, as willows by the water courses.

Teacher—Blessed is the man that walketh not in the counsel of the ungodly. * * * * * He shall be like a tree planted by the rivers of water that bringeth forth its fruit in its season, his leaf also shall not wither.

Pupils—The righteous shall flourish like the palm tree, he shall grow like a cedar in Lebanon.

Teacher—The fruit of the righteous is a tree of life.

Pupils—His branches shall spread, and his beauty shall be as the olive tree.

Teacher—A good tree can not bring forth evil fruit, neither can a corrupt tree bring forth good fruit.

Pupils—Every tree that bringeth not forth good fruit is hewn down and cast into the fire.

All—Wherefore by their fruits ye shall know them.

SUGGESTIONS FOR TEACHERS AND PUPILS BEFORE ARBOR DAY.

Be enthusiastic. Plan for the day.

Take a walk around the school grounds and get acquainted with all the trees. If possible, take the children for a ramble in the woods.

Don't forget to notice the birds and flowers as carefully as you do the trees.

Make a list of all the trees you can recognize by sight.

Do the same with birds and flowers.

Have the pupils make some drawings of trees, an orchard, or rural scene for Arbor Day. Get a few photographs or pictures of trees for decorations.

Make it a great day. Have the parents present. Remember that it is just as important for the children to plant trees at home as on the school ground.

Make Arbor and Bird Day a spring Clean-up-and-beautify Day. Cleanliness, beauty, birds and trees are closely related.

SUGGESTIVE PROGRAMS

FOR PRIMARY AND INTERMEDIATE GRADES.

1. Song—West Virginia Hills.
2. Reading—Governor's Letter to the Children of West Virginia.
3. Recitation—Trees I'll Plant.
4. Reading Lesson—My Favorite Tree.
5. Song—Arbor Day.
6. Story—How the Robin Got Its Red Breast.
7. Recitation—The Boy and the Robin.
8. Short talks by teacher and visitors on:
   How to Plant and Care for Trees.
   Our Friend, the Robin.
9. Song—America.

Arrange for the planting of some tree seeds, some flower seeds in window boxes, and put up a few little homes for the birds to live in during the summer.

FOR GRAMMAR GRADES AND HIGH SCHOOLS.

(If the school has a literary society, let the Arbor Day program be a part of the exercises.)

1. Song—West Virginia Hills.
2. Reading—Governor's Letter to Children of West Virginia.
3. Essay—Forest Conservation.
4. Story—One of the myths of the Greeks as given in the Manual.
5. Song—Nature's Greeting to the Birds.
6. Essay—What Birds Eat.
7. Recitation—Selected.
8. Debate—Some appropriate question such as, Resolved: That West Virginia should have some forest reserves.
9. Song—

Arrange to plant some trees and put up some bird boxes if possible.

FOR RURAL SCHOOLS.

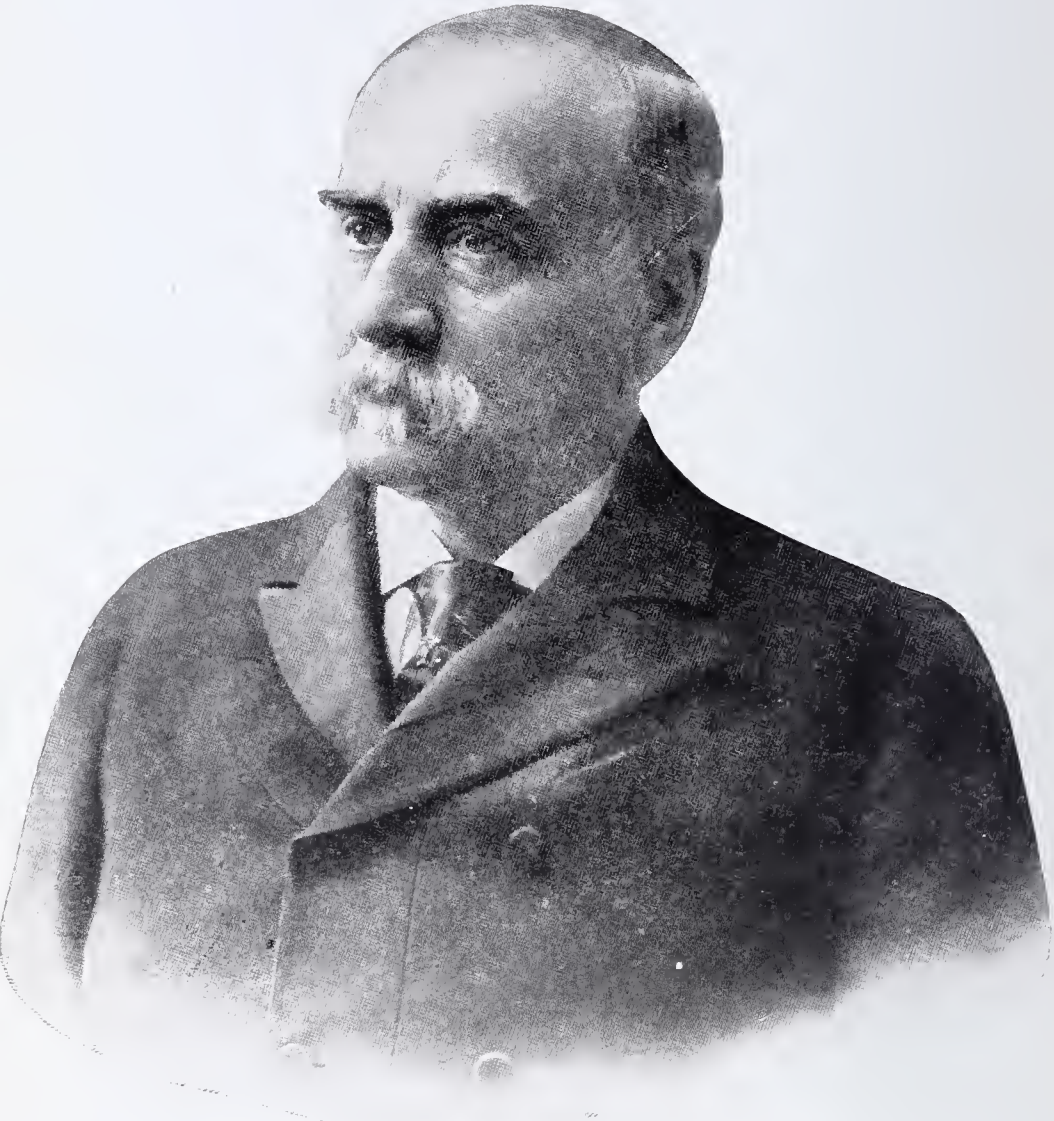
1. Song—West Virginia Hills.
2. Reading—Governor's Letter to Children of West Virginia.
3. Drill—Trees I'll Plant.
4. Essay—Trees to Plant on the Farm.
5. Song—The Grand Old Trees.
6. Talk—How to Make Bird Boxes.
7. Recitation—How the Woodpecker Knows.
8. Essay—How Birds Help the Farmer.
9. Reading—My Renter, the Wren.
10. Address by patron or prominent citizen—How to Provide for our Future Wood Supply.

Arrange to plant trees and shrubs and clean up the school grounds some time during the day. Urge the children to plant some trees, and put up a few bird boxes at home.

These programs are given merely by way of suggestion. Do not hesitate to change them to suit your local conditions.

Some of West Virginia's Valuable Products.

TREES
and
FLOWERS



J. Sterling Morton, Founder of Arbor Day.

HISTORY OF ARBOR DAY.

THE old Swiss chronicle relates that away back in the fifth century the people of a little Swiss village by the name of Brugg determined to secure a forest of oak trees on the common. More than a dozen sacks of acorns were sown and after the work was done each participant received a wheaten roll as a reward for his labors. For some reason unexplained the acorns refused to grow. The people, however, were determined to have an oak grove, so a day was appointed and the entire community, men, women and children, marched to the woods, where each very cheerfully dug up a sapling and transported it to the common, where a competent gardener superintended its planting. At the close of the tree planting each boy and girl was presented with a roll and in the evening the grown people had a merry feast and frolic in the town hall. The saplings were well watered and cared for by details of citizens under direction of the gardener, the work being voluntarily done, but every one was expected to do his share. In the course of years a fine grove was the result, which furnished a place of shade, rest and recreation for the citizens and their descendants. For years the anniversary of this tree planting was observed by the people of this town with appropriate exercises, among them being a parade of the children carrying oak leaves and branches, at the close of which rolls and other eatables were distributed in commemoration of the event. It is said a similar feast still exists in this and other villages of Switzerland.

The rapid destruction of the forests in our country called attention of students of forestry to the dangers which confronted us and brought forth numerous publications on the subject of forest preservation. It devolved, however, upon "Treeless Nebraska" to institute systematic tree planting on a given day through the organized efforts of schools and citizens. The Hon. J. Sterling Morton is generally credited with originating the idea. In 1872, acting upon his suggestion, the Governor of the State issued a proclamation designating Arbor Day and asking that the schools

and citizens generally observe the day by appropriate exercises and tree planting. The setting April sun saw over a million trees planted in Nebraska soil as a result of the first Arbor Day celebration. In 1885 Arbor Day, April 22nd, Morton's birthday, was made a legal holiday in Nebraska.

The originator of the idea lived long enough to see Arbor Day adopted in more than forty states and territories, to record millions and millions of trees added, to note thousands of school houses change cheerless surroundings for those of comfort and beauty, and to feel that in stimulating the planting of trees he had been an active factor in fostering a love for the school, the home and our country.

—*Illinois Arbor and Day Manual.*

PLANT A TREE.

He who plants a tree
Plants a hope.
Rootlets up through fibers blindly grope;
Leaves unfold into horizons free.
So man's life must climb
From the clouds of time
Unto heavens sublime.
Canst thou prophesy, thou little tree,
What the glory of thy boughs shall be?

He who plants a tree
Plants a joy;
Plants a comfort that will never cloy,
Every day a fresh reality;
Beautiful and strong,
To whose shelter throng
Creatures blithe with song.
If thou couldst but know, thou happy tree,
Of the bliss that shall inhabit thee!

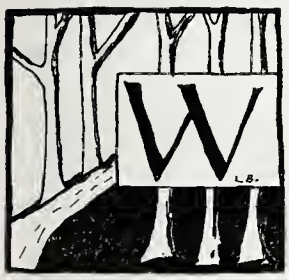
He who plants a tree
He plants peace.
Under its green curtains jargons cease:
Leaf and zephyr murmur soothingly;
Shadows soft with sleep
Down tired eyelids creep,
Balm of slumber deep.
Never hast thou dreamed, thou blessed tree,
Of the benediction thou shalt be.

He who plants a tree
He plants youth;
Vigor won for centuries, in sooth;
Life of time, that hints eternity!
Boughs their strength uprear,
New shoots every year
On old growth appear.
Thou shalt teach the ages, sturdy tree,
Youth of soul is immortality.

He who plants a tree
He plants love;
Tents of coolness spreading out above
Wayfarers he may not live to see.
Gifts that grow are best;
Hands that bless are blest;
Plant: life does the rest.
Heaven and earth help him who plants a tree,
And his work his own reward shall be.—*Lucy Larcom.*

SUGGESTIONS FOR STUDYING TREES.

J. F. M.



WHEN I was teaching my last term in a one-room rural school, I found by inquiry that the boys and girls of the country districts did not know half so much about nature as Whittier claimed for his "Barefoot Boy," so I tried several simple plans to encourage the observation and study of the many interesting things near the schoolhouse. When the leaves began to fall, I had the composition class write about "Autumn in the Forest" and managed to have the reading classes study such selections as "The Melancholy Days Have Come."

The most interesting part of our study of trees consisted of a weekly exercise in the study of the leaf of some well known tree, and through the leaf, the general characteristics and uses of the tree. On Friday afternoon I had some pupil bring in a handful of hickory leaves, for example, and gave one to each member of the upper grades. The pupils would use a few minutes in drawing with colored pencils the leaf at the top of a sheet of paper. After I had conducted an informal discussion of the leaf and the tree

which it represented, the pupils would write below the drawing a short composition about the leaf and the tree. These drawings and compositions were collected and saved. After this exercise had been continued for eight or ten weeks, the drawings and descriptions submitted by each pupil were fastened together by a very narrow ribbon or colored twine. These "Autumn Leaves" booklets served to brighten up a dingy room and attracted favorable attention on Patrons' Day.

Through this exercise the pupils got a taste of drawing, good drill in composition, and several useful ideas about leaves and trees. Some teachers may prefer to study trees through their fruit or branches. Make your own plan, but don't fail to do something to acquaint the pupils with their big, friendly neighbors, the trees.

Later on when I became principal of a village school, I noticed many of the fine shade trees along the streets were being injured in many ways. At my suggestion the teacher of the sixth grade had her boys and girls make a study of the trees on the main street of the town. Certain sections of the trees were assigned to groups of students and each group took great pride in making a thorough report on its trees.

The pupils drew a diagram of the street, indicating the location of the buildings and trees, showing the location of the trees by figures. Below the drawing, notes were made about each tree, from which one could tell the number, name, and condition of all the trees on that long stret. Some of the notes were similar to what follows:

No. 1 is a large sugar maple. Many years ago some one put a wire band around it. Since then the tree has grown until the band is buried almost out of sight. It must hurt a tree to be squeezed that way when it is growing.

No. 2 is a Grimes Golden apple tree which stands inside of the preacher's yard. Sometimes its golden fruit rolls out into the street for school children and other passersby. A dead limb should be cut out of the top.

No. 6 is a tall Lombardy poplar. It is in fine condition, but I don't like it as well as I do some of the other trees.

No.10 is being ruined because it is being used for a hitching post. The horses have gnawed the bark until ugly wounds are found on it in several places. Many of the trees in our town are being abused in the same way. I think the town council or the owners of the property should protect these trees with wire screens.

Photograph by W. E. Rumsey.

WHAT A LITTLE WORK WILL DO.

The lower picture was taken from exactly the same place as the one above.

Enough has been said to show how such a simple plan could be carried out and what good material for observation and interesting language and nature study work it would afford. The townsfolk noticed the children making these studies and immediately concluded that the school was interested in at least one practical problem. Let us not confine our school to four narrow walls. Take a little time to study and visit the trees.

A friend of mine won the respect of his patrons and the admiration of his pupils by offering a new lead pencil to the pupil who would bring to him the longest correct list of trees which grew on the parent's farm. The teacher was careful to make the contest a long, fair and friendly one, and through this simple device he stirred up an interest in trees until everyone from six-year-old Willies and Marys to grandfathers and grandmothers were talking about the teacher, the school and trees.

Why not try some of these plans or better ones which you can make for yourself?

HIAWATHA'S SAILING.

(BUILDING THE BIRCH CANOE.)

"Give me of your bark, O Birch tree!
Of your yellow bark, O Birch tree!
Growing by the rushing river,
Tall and stately in the valley!
I a light canoe will build me,
Build a swift Cheemaun for sailing,
That shall float upon the river,
Like a yellow leaf in autumn,
Like a yellow water lily!"

With his knife the tree he girdled;
Just beneath the lowest branches,
Just above the roots he cut it,
Till the sap came oozing outward;
Down the trunk, from top to bottom,
Sheer he cleft the bark asunder,
With a wooden wedge he raised it,
Stripped it from the trunk unbroken.

"Give me of your boughs, O Cedar!
Of your strong and pliant branches,
My canoe to make more steady,
Make more strong and firm beneath me!"

"Through the summit of the Cedar
Went a sound, a cry of horror,
Went a murmur of resistance,
But it whispered, bending downward,
"Take my bows, O Hiawatha!"

Down he hewed the boughs of Cedar,
Shaped them straightway to a framework,
Like two bows he formed and shaped them,
Like two bended bows together.

"Give me of your roots, O Tamarack!
Of your fibrous roots, O Larch tree!
My canoe to bind together,
So to bind the ends together
That the water may not enter,
That the river may not wet me!"

And the Larch, with all its fibres,
Shivered in the air of morning,
Touched his forehead with its tassels,
Said, with one long sigh of sorrow,
"Take them all, O Hiawatha!"

From the earth he tore the fibres,
Tore the tough roots of the Larch tree,
Closely sewed the bark together,
Bound it closely to the framework.

"Give me of your balm, O Fir tree!
Of your balsam and your resin,
So to close the seams together
That the water may not enter,
That the river may not wet me!"

And the Fir tree, tall and sombre,
Sobbed through all its robes of darkness,
Rattled like a shore with pebbles,
Answered wailing, answered weeping,
"Take my balm, O Hiawatha!"

And he took the tears of balsam,
Took the resin of the Fir tree,
Smeared therewith each seam and fissure,
Made each crevice safe from water.

* * * * * *

Thus the birch canoe was builded
In the valley by the river,

In the bosom of the forest;
And the forest's life was in it,
All its mystery and its magic,
All the lightness of the birch tree,
All the toughness of the cedar,
All the larch's supple sinews;
And it floated on the river
Like a yellow leaf in autumn,
Like a yellow water lilly.

—*Longfellow's "Hiawatha."*

MY FAVORITE TREE.

(If possible, let each pupil carry a branch of the tree he describes.)

First Pupil—

"I speak for the elm. It is a noble tree. It has the shape of a Greek vase and such rich foliage running down the trunk to the very roots, as if a vine were wreathed around it."

Second Pupil—

"My favorite is the maple. What a splendid cupola of leaves it builds up into the sky. And in autumn, its crimson is so rich one might call it the blush of the woods!"

Third Pupil—

"The birch is the tree for me. How like a shaft of ivory it gleams in the daylight woods! How the moonlight turns it into pearl!"

Fourth Pupil—

"What a tree is the oak! First a tiny needle, rising toward the sun, a wreath of green to endure for ages. The child gathers the violet at its foot; as a boy he pockets the acorns; as a man he looks at its towering height and makes it the emblem of his ambition."

Fifth Pupil—

"The oak may be the king of the lowlands, but the pine is king of the hills. There he lifts his haughty head like a warrior, and when he is roused to meet the storm, the battle cry he sends down the wind is heard above all the voices of the greenwood."

"Hail to the trees!
Patient and generous, mothers of mankind;
Arching the hills, the minstrels of the wind,
Spring's glorious flowers and summer's balmy tents.
A sharer in man's free and happier sense.
The trees bless all, and then, brown-manteled, stand,
The sturdy prophets of a golden land."

TREES TO PLANT.

I fear that too often on Arbor Day we plant trees without even thinking whether they are suitable for shade, or for fruit, or whether they are really good for anything or not, just so they are trees. Very briefly I want to suggest some of the various kinds of trees which we may plant on Arbor Day and where each should be planted.

Possibly most of the planting which will be done on Arbor Day will be for the purpose of beautifying school and home grounds. One of the very prettiest shade trees is the maple. There are many varieties of this tree, any of which, through rather slow growing, will develop into a very beautiful shade tree if properly pruned and cared for. The elm is also a stately tree for lawns and school house grounds where enough space can be had to give it the proper setting. It is slow growing and is not usually appreciated until it becomes quite large. The linden is a tree which is quite famous in history and is found in the fine old residence streets of many of our cities and towns. Among the bushes and shrubs the laurel and the rhododendron are most appropriate for West Virginia, and do well in almost any part of the state if properly started.

However, not all the attention of Arbor Day should be devoted to learning about the shade trees, because we are fast approaching a time, even in our own state, when timber is becoming very scarce and more must be done to reforest our mountain slopes. Much is being done by the government and some of the larger lumber companies to set out anew the forest land which has been cut over, but more can be done by teaching the boys and girls too, how to provide a supply of rapid growing young trees in the farm woodlot which will develop into good fence posts ready for use by the time the boys take hold of the farm. Probably the fastest growing and the easiest to start is the locust, though some very wonderful claims are made for the catalpa. The pine and walnut are good where a little more time can be allowed for the growth of the tree. Even the poplar and the oak are being planted to a considerable extent on some of the mountain land where no other use can be made of the surface and where it can be protected from stock until the trees attain a considerable size. The trees soon reach a time in their growth in which the root system is sufficient to hold the moisture, and the falling leaves form a mulch on the top of the ground so that in a very few years they are able to protect the land from the very rapid erosion which takes place on barren hillsides.

One of West Virginia's Consolidated Schools.

Courtesy T. C. Atkenson.

Attractive Home and School Grounds.
Where you find one you will probably find the other.

But in a great fruit state like ours, we must not forget to mention the planting of the apple, the pear and the peach. Then too the robin must be provided for when worms are scarce, so we must have a few cherries. Why not have a few fruit trees in the back yard? Nothing is more delicious than apples gathered from the old tree in the yard as we come in from a hard day's work in the haying fields. Even in town I believe we would appreciate a few home grown peaches or grapes. Why could we not have a little grape arbor extending out from the kitchen door as well as the pergola with its trailing vines in front?

Let us continue to plant trees. If the school yard has plenty, let each boy and girl set out one or two at home, and let us encourage the planting of the useful kind as well as the ornamental.

DRAPER'S "TEN COMMANDMENTS" ON TREE PLANTING.

1. Do not allow roots to be exposed to sun, drying winds, or frost.
2. Prune, with a clean sharp cut, any broken or injured roots.
3. Have the holes large enough to admit all the roots without cramping.
4. Plant in fine loam, enriched with thoroughly decomposed manure.
5. Do not allow any green unfermented manure to come in contact with the roots.
6. Spread out the roots in their natural position, and work fine loam among them, making it firm and compact.
7. Do not plant deep. Let the upper roots be set about an inch lower than before.
8. Remove all broken branches, and cut back at least one-half of the previous year's growth of wood.
9. If the season lacks unusual rainfall, water thoroughly twice a week.
10. After-culture. Keep soil in good degree of fertility. Mulching the trees in autumn with manure is beneficial.

WHEN THE GREEN GITS BACK IN THE TREES.

BY JAMES WHITCOMB RILEY.

In the spring when the green gits back in the trees,
  And the sun comes out and stays,
And your boots pull on with a good tight squeeze,
  And you think of your barefoot days;
When you ort to work and you want to not,
  And you and yer wife agrees
It 's time to spade up the garden lot—
  When the green gits back in the trees—
  Well, work is the least of my idees
When the green, you know, gits back on the trees.

When the green gits back in the trees, and bees
  Is a buzzin' aroun' agin,
In that kind of a lazy "go-as-you-please"
  Old gait they hum roun' in;
When the ground 's all bald where the hayrick stood,
  And the crick 's riz, and the breeze
Coaxes the bloom in the old dogwood,
  And the green gits back in the trees—
  I like, as I say, in sich scenes as these,
The time when the green gits back in the trees.

When the whole tail-feathers o' winter time
  Is all pulled out and gone,
And the sap it thaws and begins to climb,
  And the sweat it starts out on
A feller 's forrerd, a gittin' down
  At the old spring on his knees—
I kind o' jes' like a loaferin' roun',
  When the green gits on the trees—
Jes' a potterin' 'roun' as I—durn—please—
  When the green, you know, gits back on the trees.

ORIGIN OF VIOLETS.

I know, blue modest violets,
  Gleaming with dew at morn—
I know the place you come from,
  And the way that you are born!

When God cut holes in Heaven,
  The holes the stars look through,
He let the scraps fall down to earth,
  The little scraps are you.

DO APPLE SEEDS POINT UP OR DOWN?

When teacher called the apple class, they gathered round to see
What question deep in apple lore their task that day might be.
"Now tell me," said the teacher, to little Polly Brown,
"Do apple seeds grow pointing up, or are they pointing down?"
Poor Polly didn't know, for she had never thought to look—
(And that's the kind of questions you can't find in a book.)
And of the whole big apple class, not one small pupil knew
If apple seeds point up or down! But then, my dear, do you?

—*Carolyn Wells*, in St. Nicholas.

FOREIGN LANDS.

By Robert Louis Stevenson.

Up into the cherry-tree
Who should climb but little me?
I held the trunk with both my hands,
And looked around on foreign lands.

I saw the next-door garden lie,
Adorned with flowers, before my eye,
And many pleasant places more
That I had never seen before.

I saw the dimpling river pass
And be the sky's blue looking-glass;
And dusty roads go up and down,
With people tramping into town.

If I could find a higher tree,
Farther and farther I could see,
To where the grown-up river slips
Into the sea among the ships;

To where the roads on either hand
Lead onward into fairyland,
Where all the children dine at five,
And all the playthings are alive.

A FEW OLD PROVERBS.

"If the Oak is out before the Ash,
'Twill be a summer of wet and splash;
If the Ash is out before the Oak,
'Twill be a summer of fire and smoke."

"When the Hawthorn bloom too early shows,
We shall have still many snows."
"When the Oak puts on his goslings gray
'Tis time to sow barley night or day."

"When Elm leaves are as big as a shilling,
Plant kidney beans if you are willing;
When Elm leaves are as big as a penny,
You must plant beans if you wish to have any."

THE NYMPHS AND OTHER GODDESSES.

The Greeks, in their love for nature, believed that all her forms had life and feeling. The mildness of their climate, their out-of-door life, the apparent nearness of sea and sky, the beauty of mountain, tree and flower, and glistening rivulet, made nature dear to them. Their love for the beautiful outside world was nourished, and caused them to look upon all nature as friendly. Their vivid fancy peopled grove and dale with forms that returned human affection.

They liked to believe that every stream had a naiad sporting in its waters, and that dryads lived in the graceful tres, and the shrubs and flowers were the outward forms of spirits imprisoned there.

Oreads, or mountain nymphs, wandered over the mountains, and their laughter echoed in the valleys. Nerieds and oceanids—water-nymphs—sported in the waves of the ocean, and with the tritons, attended Neptune, god of the deep blue sea.

The sunflower concealed the sea nymph Clytie, and lovely Echo was transformed into a voice. The laurel tree with its glossy green leaves, was but the nymph Daphne, to whom, when fleeing from Apollo, her father, the river god, gave this form.

The sirens lived on an island of the sea. They sang so beautifully that all the sailors who passed that way longed to see the singers, and, coming too near, were wrecked on the rocks which the water concealed.

Aurora and Memnon.

Memnon was the son of Aurora and Tithonus, and was dearly loved by his young and beautiful mother. He became a very brave man. When the Trojan war broke out, he came from the East to help the Trojans. At first he was successful, and put the Greeks

to flight; but when Achilles met him, a great struggle began. Long they fought and bravely; but at last Memnon fell.

Aurora, who had witnessed Memnon's defeat, told his brother, the Winds, to bear his body to his home in the far East. There in the evening Aurora came to weep over the remains of her son. The Hours, the rosy sister goddesses, joined in her grief, and the shining Pleiades veiled their faces in sorrow.

Aurora still laments the untimely death of her son, and her tears you may find in the early morning as dew-drops upon the bending grass and flowers.

Aurora and Tithonus.

Aurora loves the pretty flowers and often wanders among the gardens watching and caring for the tender blossoms.

One morning she met the handsome youth, Tithonus. Aurora loved Tithonus, and, as he was a mortal, she begged the gods to give him immortal life. Unfortunately, she forgot to ask for him immortal youth, and after awhile he began to grow old. Although he still lived in her palace and fed on Ambrosia, the food of the gods, he became smaller and smaller, until Aurora was ashamed of him and turned him into a grasshopper.

This is the way you see him today, with the face of an old man on the body of a grasshopper.

Ceres and Persephone.

You will wonder why Persephone is not always with her mother. This is the story the Greeks tell.

As Ceres was supposed to take care of the ripening grains and fruits all over the earth, it was neccessary for her to visit every country of the world. One day as she was seated in her chariot, drawn by those wonderful winged dragons, ready to set forth on her travels, she kissed her little daughter, and warned her not to go far from home. She had never before felt so anxious about leaving her little girl, but she had to go.

Persephone threw a loving kiss to her fond mother, and then went to the shore of the sea to play with the sea nymphs. They were graceful, slender girls, with sea green hair and eyes like opals. They were charming playmates, but could not come out of the the water. Persephone gathered flowers for them, and was obedient to her mother's command.

But Pluto, the god of the palaces of gold and silver under the

earth, looking out from one of the caverns, saw the pretty child, and wanted to carry her away to his home. So he caused a wonderful flower, all crimson and gold, to charm Peresephone away. She stooped to pick it; and lo! it came up by the roots, a deep cavern yawned, and the chariot of King Pluto appeared.

The driver, who was King Pluto himself, caught the frightened Persephone in his arms. Whipping his coal black steeds, he hurried away with her to his home in Hades.

The Search of Ceres.

When Ceres returned and could not find her little girl, she was frantic. Over the whole earth she drove her chariot, calling upon all things to help her in her search, but in vain.

Then she became so sad that she refused to allow the earth to produce any food for man or beast. The flowers and trees and harvest drooped and faded. In vain did gods and men plead with her. She would not be comforted.

At last, Jupiter sent the swift-flying Mercury, messenger of the gods, to Pluto, commanding him to release Persephone. When Ceres saw her daughter restored to her, what joy was hers! Yet she feared one thing. "Have you eaten anything in Pluto's kingdom, my child?" was her anxious question.

"Yes, dear mother," Persephone replied, "six pomegranate seeds."

"Alas! then you must remain with Pluto six months of every year," said the sad Ceres.

Thus it is that for six months Ceres and Persephone are together, the earth is covered with the blessed gifts of Ceres, and it is summer over the land. But when they are separated, the mother grieves, and the winter is king.

Clytie.

Clytie was a beautiful sea nymph who lived in a wonderful palace under the sea. Her dress was of pale green moss, and she wore ornaments of delicate pink coral in her sunny curls. Her carriage was an exquisite shell of many brillant hues, which glittered in the sunlight, and gold fish were her strange and beautiful horses.

One day when she was driving over the surface of the sea she saw the glorious god, Apollo, in his golden chariot. Day after day she watched him journey through the deep blue sky, and hoped he would see her. Alas! he never noticed the lonely sea maid so far below.

At last, she left her chariot, and all day long watched him from the shore. When the sun had gone, and she started to return to her home under the waves, she could not move. Her feet had become fastened to the soil and her form began to change into the sunflower. Her green dress became the stalk and leaves, and her golden hair changed into the yellow petals.

But the flower still loves the sun. In the morning it looks towards the East, and rejoices when the sun appears above the horizon, following his course and slowly turning its face towards the West.

So the sunflower is the emblem of constancy. Poets often speak of the great love and faithfulness of Clytie, and artists paint her picture and sculpture her form.

In the art galleries may be found a lovely bust of a young girl. The sculpture is unnamed but it is supposed to be one of Clytie, for the shoulders seem to rise from the leaves of the sunflower.

Apollo and Daphne.

One day Apollo found Cupid, the mischievous little god of love, playing with his arrows, and said: "Why are you playing with my arrows? You are only a boy and should not use manly weapons. Cupid did not like to be called a child, so took from his own quiver two tiny arrows, one tipped with lead, one with gold. The golden arrow he shot into the heart of Apollo; the leaden, into the heart of a young and graceful wood nymph, Daphne.

When Apollo saw Daphne, the golden arrow in his heart made him love her, and he pursued her; but the heavy arrow of dull lead in her heart made her dislike him, and she fled.

Soon Daphne found that she could not run as fast as Apollo, so she called upon her father, the river god, to save her. He heard her cry, and changed her into a beautiful laurel tree. When Apollo came up he saw that her body was growing rough with the bark, her slender feet were changing into the roots, and her long wavy hair was turning into the shiny green leaves.

The sun god grieved at this change but said: "This tree shall be sacred to poets and musicians and artists. I shall wear a wreath of laurel, and all who follow the arts shall be crowned with the laurel wreath."

The Apples of the Hesperides.

Far away in the west was a beautiful land that belonged to King

Hesperus. This king had three lovely daughters who cared for the fruits and flowers of the gardens. In the gardens were many graceful trees whose boughs bent under the weight of delicious fruit. Flowers red, yellow and orange adorned the walks.

When Juno, goddess of the sky, married Jupiter, her sister Ceres gave her a handsome present. Ceres is the earth goddess who cultivates the fruits, flowers and grains, and the best gift she could bestow upon her sister was some golden apples.

Juno prized these apples highly, and gave them to the Hesperides, the daughters of Hesperus. They placed them upon the shadiest tree of the garden, and watched and cared for them very carefully.

Once they were taken away by Hercules, the strong hero who performed many wonderful labors, but they were afterwards restored to the careful hands of the maidens.

Many heroes heard of the beautiful land, Hesperia, and of the wonderful apples growing there, and sailed westward to find them. Some people think that the golden apples were really the oranges of Spain, a rich and famous country west of Greece.

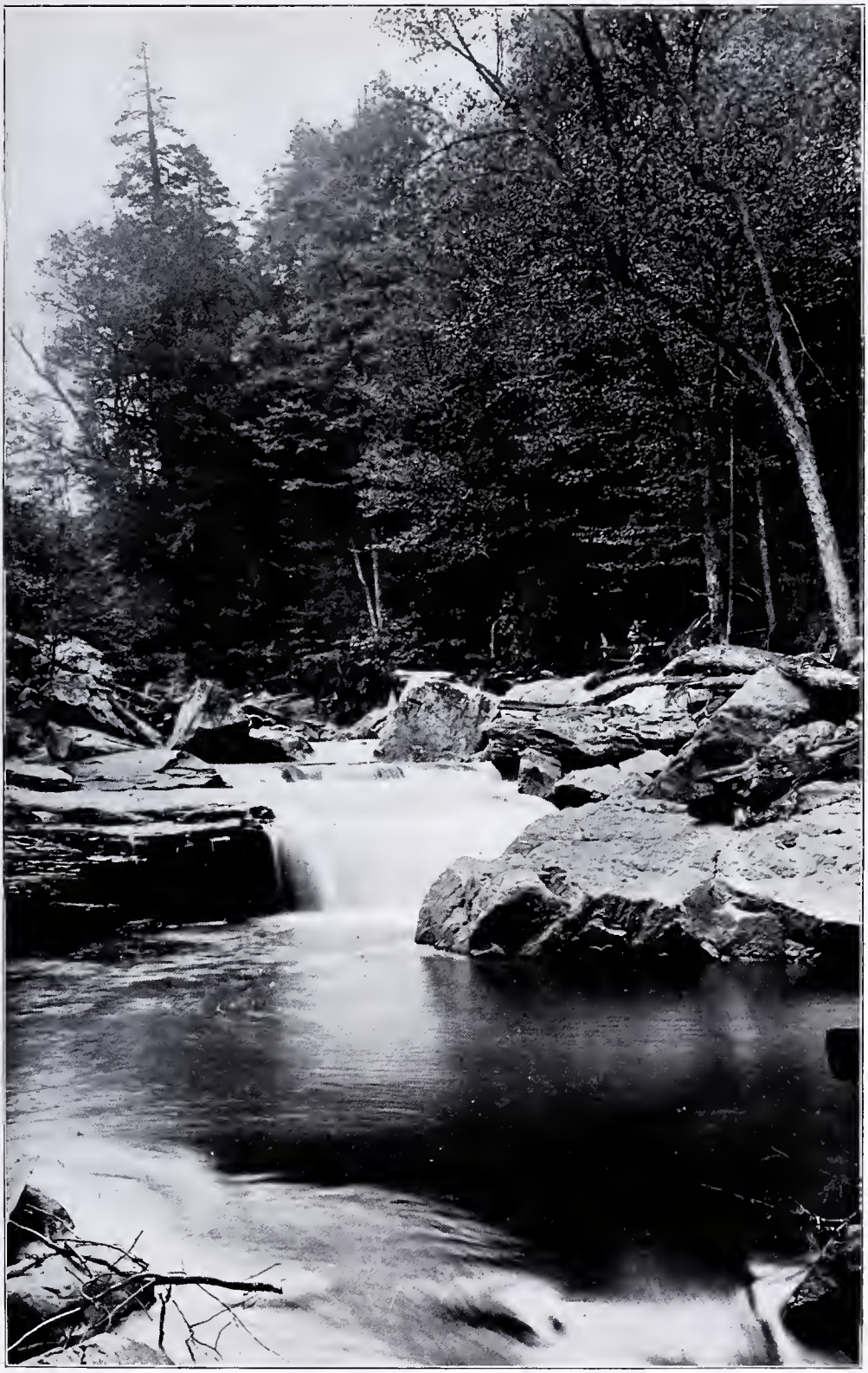
The Origin of the Moss Rose.

One beautiful summer day a fairy saw a butterfly with golden wings. He tried to catch the lovely insect, and it led him a merry chase from flower to flower. At last the fairy found himself in a strange wood, and did not know the way home. The sun had set, the wind had gone away, and no one could direct him.

Wearied with his search, he determined to rest until the moon rose, when the fairies would come forth to dance upon the mossy banks. He looked about him for a resting place, and asked a stately lily to let him sleep on her broad leaves; but the petals were closed, and she would not receive him. Many flowers refused him shelter. At last, worn out and almost hopeless, he came to a rose. This lovely flower spread wide her soft, fragrant petals as a downy couch for the tired fairy.

After a quiet nap he awoke, rested and grateful, and asked the rose what return he could make for her kindness. The rose bowed her pretty head, and replied, "Make me more beautiful."

The fairy looked at the rose blushing in the silvery moonlight, and wondered how she could be more lovely. Soon he noticed the dainty green moss at his feet, and drew a delicate veil of it over the rose.



Courtesy W. Va. Geological Survey.

West Virginians Love Nature as Much as the Greeks Did.

Narcissus.

Narcissus was a vain youth, and loved no one but himself. One day, while looking into a quiet stream, he thought he saw a lovely maid in the water gazing up at him.

He smiled upon her, and she also smiled. Day after day he came to the bank and begged the lovely maid to come out of the water, and roam with him through the flowery meadows of earth. Every day he believed she would come; for she seemed to smile upon him and welcome him, even as he spoke and smiled upon her.

Some days, when the waters were dark and ruffled by the wind, he could not see her blue eyes and golden ringlets, and he thought she was vexed with him.

He never knew it was his own face he saw reflected in the water, and at last, after weary watching and waiting, he pined away and died. Echo and all the other nymphs of grove and stream mourned for him. He was beautiful even in death, for the gods had changed him into a flower. His pale face and golden hair were changed into the delicate narcissus, which delights us with its graceful form and rare fragrance.

The narcissus grows upon the margin of streams, and, bending over the waters, seems to admire its image mirrored there.

Colorado Arbor and Bird Day Book.

Cross section showing the annular rings of balsam fir tree. Each ring represents one year's growth. By this method the age of a tree may be determined, as the rings can be counted very readily. Notice that the rings nearest the bark are very much larger than those at the centre of the log.

TO A MOUNTAIN DAISY.

On Turning One Down with the Plow in April.

Wee, modest, crimson-tipped flow'r,
Thou's met me in an evil hour;
For I maun crush amang the stoure
Thy slender stem;
To spare thee now is past my pow'r,
Thou bonnie gem!

Alas! it's no thy neebor sweet,
The bonnie lark, companion meet!
Bending thee 'mang the dewey weet,
Wi' spreckl'd breast,
When upward-springing, blithe, to greet
The purpling east.

Cauld blew the bitter-biting north
Upon thy early, humble birth;
Yet cheerfully thou glinted forth
Amid the storm,
Scarce rear'd above the parent earth
Thy tender form.

The flaunting flow'rs our gardens yield,
High shelt'ring woods and wa's maun shield;
But thou, beneath the random field
O' clod or stane,
Adorns the histie stibble-field,
Unseen, alane.

There, in thy scanty mantle clad,
Thy suawie bosom sun-ward spread,
Thou lifts thy unassuming head
In humble guise;
But now the share uptears thy bed,
And low thou lies.

* * * * * * * *

—*Robert Burns.*

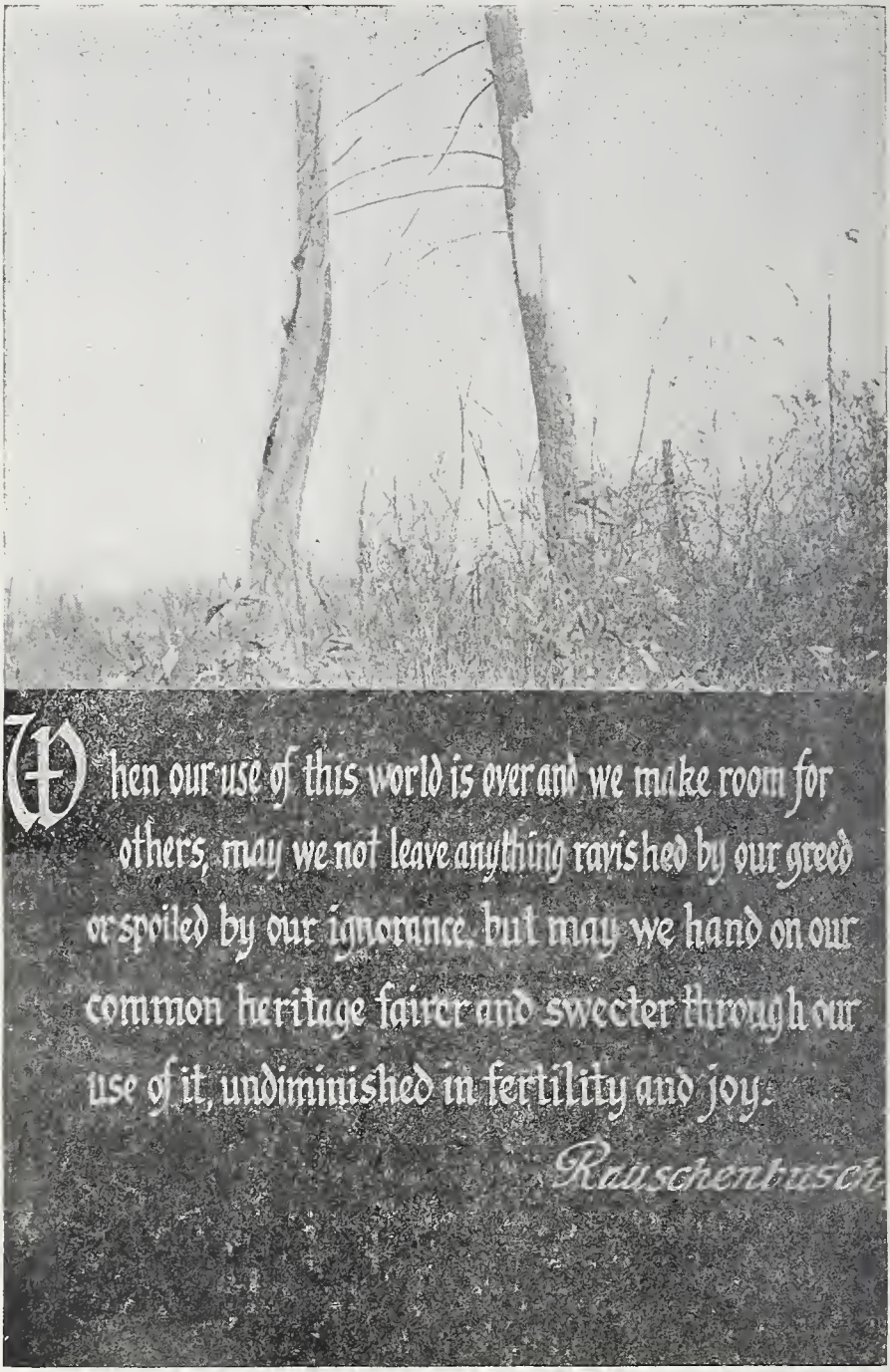
THE SPIRIT OF THE WOODS.

(Written Especially for This Manual.)

HAD we lived in England about two thousand years ago we probably would have worshipped the great oak trees. At that time great forests of oak covered all England, and the people saw in them such good qualities, that they, with their priests, the Druids, worshipped them. In southern Europe, about the same time we are told about the Dryads, the fairy maidens who lived in the great trees, and were worshipped by the young Greek hunters. Now-a-days we do not see the sprites that live in the trees, but we recognize the peaceful spirit of the woods, and we appreciate the great and growing importance of every tree in the forest.

One of the greatest demands of modern civilization comes echoing from the woods,—love, spare, protect and plant. As a mere matter of sentiment, we have reasons enough to heed this call. For what a glorious object is a tree! How magnificent a forest of them on the boundless plain, or on the mighty hill-side! The tree is the climax of the plant creation. There is scarcely its match for beauty among unintelligent objects on the face of the earth. The thick-topped maple, with its wholesome foliage, in whose close and dark recesses the hang-bird sings her wood-note wild and free, in the hot mid-summer noon; the lofty, clear-limbed, open-boughed button wood, with its dainty leaf, its scarred trunk, and excoriated branches; the mighty oak, with its gnarled limbs, and depth of shade, to whose leaves the sun, storm, rain and dew bring their tribute; and the elm, that patriarch of the family of shade,—the umbrageous, the antlered elm,—these all are the beautiful handiwork and architecture of the Creator, upon which the eye of man may ever look with refreshing delight.

To the people of West Virginia the subject of Forestry doubtless conveys the meaning nearest them. To the hunter it means the restriction of lumbering so that game may abound. To the lumberman, it is the buying and cutting of large forests for commercial gain. To the student and forester it means the rational management of woodlands to serve the interests of mankind in the great achievements of material and spiritual progress. In Europe it has reached a higher development than it has in America. Our civilization is new. We had to cut down trees to make room for



Courtesy of C. C. and C. L. D. of the Presbyterian Church.

civilization. We got into the habit of cutting down trees. We are just beginning to realize that we have carried this work too far. We see with dismay that our supply is not illimitable. The price of lumber is rising higher and higher. We trace spring floods and summer droughts to the deforestation of mountain-sides. We see that our rivers are carrying ever increasing burdens of fertile soil to the ocean. We see on every hand, evils resulting, because our forests are going before the ruthless axe of the woodsman. Our love for the trees must lead us to champion the cause of the abused forests, for their sake and for our own.

Our civilization is built upon wood. From the cradle to the coffin in some shape or other, it surrounds us as a convenience or a necessity. It enters all our structures as an essential part. It serves to ornament them, furnish them, warm them, and cook our food. More than half of our people use wood as a fuel, and until very recent times, it was used in melting the ores and shaping the metals to be used with the wood itself.

The use of wood per capita in the United States is about 350 cubic feet, exceeding that of all other nations. The available timber in the United States has been estimated at about 2 trillion feet board measure. However enormous these figures may sound, they will supply the country for only about forty years more. The yearly consumption of wood in the United States amounts to 40 billion feet of board measure, enough to make a plank 300 feet wide around the world. The most urgent need of husbanding and reproducing the forests at once becomes evident.

Besides the consideration of furnishng the needful supply of wood, there are other considerations, which enter into the problem of forest economy. The influence which a forest exerts on the soil, temperature, water supply, and other forces of nature, is to be reckoned with. The consecration of groves to religious uses, and the various mythological conceptions connected with them, point to the fact that forests have always been regarded as sacred and valuable in their influences.

The legend of Erichthonios most beautifully illustrates the ancient idea of the importance of the forests to agriculture. By the felling of an oak tree, he offended the Dryads and they asked Ceres, the goddess of agriculture, to send Famine, who took hold of Erichthonios and killed him.

In the face of all these facts and advantages of the forests, it seems essentially important that public sentiment be aroused to the

necessity of wisely dealing with this all important subject; that the rising generation be educated in right forestry ideas, and that the state and nation adopt rational policies of ownership and control of the forests of the country. The interests of the future must lie with the state, in this, as it has with all other interests, where the state can do for the individual, what the individual cannot do for himself. The policy of the state shall be to guard the people's interests in their future needs of what the forest affords. The state does its work in forestry by means of (1), educational agencies, (2), restrictive measures, and (3), forest ownership. All three of these means must be exercised at the same time, but it seems that government ownership is the most practical solution of the problem at this time.

In conclusion let me try to enlist the interest of every pupil in the planting of trees, whether for esthetic or for economical reasons. In either case it pays. He who plants a tree looks forward to future ages, and plants for posterity. The work he does will grow better, year by year. There is nothing to prevent us from making the world about us profitable with trees, pleasant with shade, pure with blossom, and cheerful with the songs of birds. With every tree, shrub, grass-blade, breeze, flower and bird, we should have a sympathetic, intelligent relationship, and they should become a part of our lives. There is something unspeakably delightful in a spot of ground, covered with trees, flowers, and grass, and there is nothing which so strongly endears us to the scenes of our youth, as the beautiful picture of the old home, with pleasant natural surroundings.

ARETAS W. NOLAN,
Formerly Professor of Forestry.
University of West Virginia.

FACTS ABOUT THE VALUE AND USES OF FORESTS.

A toothpick is a little thing, yet it is reported that one factory uses 10,000 cords of wood annually in the production of these splints of wood.

Shoe pegs are small affairs; yet a single factory sends to Europe annually, 40,000 bushels of pegs, besides what it sells in this country.

A spool is of small account when the thread is wound off; yet several factories use each from 1,800 to 3,500 cords of wood every year in making these articles. Thousands of acres of birch trees

Courtesy State Board of Agriculture.

THE LAST OF THE FOREST.

Axe and fire have changed a former forest of nearly 100 square miles into this. Tucker County, West Virginia.

have been bought at one time by thread manufacturers, for the sole purpose of securing a supply of spools.

Who thinks much of the little friction match, as he uses it, to light the lamp or fire, and then throws it away? But one factory, it is said, makes 60,000,000 of these little articles every day, and uses for this purpose 12,000 square feet of the best pine lumber.

Forests affect the climate of a country; influence the rain of a country; build up a wall and protect the crops; they keep the air pure. The leaf-mold in the forest holds back the rains. We draw $700,000,000 worth of products every year from the trees. No other crop equals this in value.

About 60 per cent of all our railroad ties are made of white oak; nearly 20 er cent are of ine.p Since every mile of railway needs about twenty-five hundred ties, and there are over two hundred thousand miles of such roads in our country, it takes millions of acres of timber to supply a single set of ties. Such a set has to be replaced about every seven years. Thus it is that the railways rank among the greatest consumers of wood in the country.

Our telegraph and telephone poles are made largely of hemlock and cedar. The price paid for such timber varies from two to ten dollars per pole.

Flour barrels are made largely from elm. Barrels for liquids are made from a fine grade of white oak; also ash and elm.

Our furniture is made from walnut, ash, oak, maple, and other hard woods.

White oak and hickory are used in the manufacture of wagon and buggy wheels. Soft woods, as poplar, aspen, spruce, pine and basswood, are used in the manufacture of paper such as is used in newspapers, notebooks, etc.

Three-fourths of our lumber is made from soft woods, such as white pine, spruce, hemlock and redwood.

The woodwork of machinery is made from hard lumber, which constitutes about one-fourth of our lumber output. It comes principally from the wide region east of the Mississippi, between the northern and southern soft wood belts.

The great pineries of Wisconsin, Minnesota and Michigan, supply our white pine, the most useful timber in the north temperate zone, because it is in greatest demand for building purposes.

The bark of the hemlock tree is used in the tanning of leather.

Corks are made from the bark of the cork oak, which grows only in the Mediterranean countries and Portugal.

As a national industry, forestry stands second only to agriculture in number of persons and amount of capital employed and in the value of product.—Montana Arbor Day Manual.

DAISIES AND BUTTERCUPS.

(For Two Little Girls.)

DAISY.

I'm a pretty little thing,
Always coming with the Spring,
In the meadows green I'm found
Peeping just above the ground,
And my stalk is covered flat
With a white and yellow hat.

Little maiden, when you pass
Lightly o'er the tender grass,
Step aside and do not tread
On my meek and lowly head,
For I always seem to say
"Chilly Winter's gone away."

BUTTERCUP.

I'm a cunning little thing
Coming, also, with the Spring.
Near the Daisy I am found,
Standing straight above the ground,
And my head is covered flat
With a glossy yellow hat.

Little children, when you pass
Through the tall and waving grass,
Do not pluck, but gently tread
Near my low and mossy bed,
For I always seem to say,
"Milk and butter fresh today."

TREES I'LL PLANT.

(Recitation for three children.)

First Child—

Because I love the robins well
I'll plant a cherry tree,
Then when farmers roughly scold
They'll come and live with me.

Second Child—

Because I love the pretty squirrels,
So frisky and so gay,
I'll many nut trees plant around,
Then they'll come near to play.

Third Child—

Because I love the shady spots
That leafy limbs can make,
A dozen trees I'll plant each year
Just for their own sweet sake.

Together—

Because we love the whole wide world,
And every living thing,
We'll plant, and bless, and keep the trees
For all the good they bring.

—*Lettie Sterling.*

THE TREES CHOOSE A KING.

Several hundred years before Christ the people of Israel chose judges and kings from the most popular leaders without regard to law. Just as is sometimes the case in our own time and country, the best man was not always chosen. In those days some leaders were willing to use unfair means to gain office, and some of the people were weak enough to sell their influence for money.

A good example of ancient politics is found in the story of how Abimelech became king. He belonged to a very large family and had his many brothers urge the people to accept him as king. These brothers made up a campaign fund with which Abimelech hired "vain and light persons" to follow him. With these followers he went to his father's house and killed all of his brethren except Jotham and became king.

Jotham fled and a little later made a bitter speech to the citizens. He showed that Abimelech was low and unworthy, and to make it plain that he had been chosen through fear rather than on his real worth, Jotham told the following interesting parable of the trees:

"The trees went forth on a time to anoint a king over them; and they said unto the olive tree, Reign thou over us.

But the olive tree said unto them, Should I leave my fatness, wherewith by me they honour God and man, and go to be promoted over the trees?

And the trees said to the fig tree, Come thou, and reign over us.

But the fig tree said unto them, Should I forsake my sweetness, and my good fruit, and go to be promoted over the trees?

Then said the trees unto the vine, Come thou, and reign over us.

And the vine said unto them, Should I leave my wine, which cheereth God and man, and go to be promoted over the trees?

Then said all the trees unto the bramble, Come thou, and reign over us.

And the bramble said unto the trees, If in truth you annoint me king over you, then come and put your trust in my shadow; and if not, let fire come out of the bramble, and devour the cedars of Lebanon."

THE TREE'S DREAM.

Little green tree, so slim and small,
Standing under the school-house wall,
Planted there upon Arbor Day,
Tell me, what are you doing, say?
So quiet you stand, and so still you keep,
I really believe you have gone to sleep.

"Oh, I'm dreaming now," said the little tree,
"Of pleasant days that are to be,
Of the robins and bluebirds that every spring
Will come and sit in my boughs and sing.
Oh, plenty of company I shall see
In my gay green tent," said the little tree.

"I'm dreaming of all the little girls,
In gingham aprons and yellow curls,
That under the shade of my leafy boughs
Will make for themselves a wee play-house,
With nice bur-baskets, the dear, little souls,
And pepper-pod teapots and sugar bowls.

"I'm dreaming of all the barefoot boys
That will fill my branches with merry noise,
And climb my limbs like an easy stair,
And shake down my nuts till the boughs are bare.
Oh, a jolly good comrade I shall be
When I grow up!" said the little tree.

—Elizabeth H. Thomas.

SOME WEST VIRGINIA TREES.

THE DECIDUOUS FOREST TREES.

Ash (Blue Ash, Green Ash, Red Ash, Water Ash, White Ash)
Aspen,
Beech,
Birch (Black Birch, Red Birch),
Buckeye,
Chestnut,

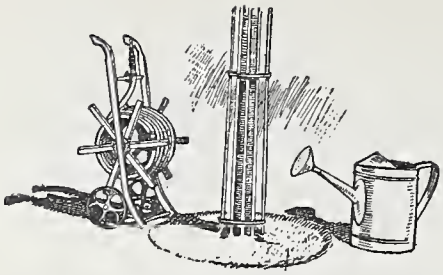
Cottonwood,
Cucumber,
Dogwood,
Elm (Red or Slippery Elm, Small Leafed Elm, White or Rock Elm)
The Gums (Black or Sour Gum, Sweet Gum),
Hackberry,
Hickory (Shell-bark Hickory, Common White-heart Hickory, Red Hickory, Pignut Hickory.)
Ironwood,
Linden or Lime Tree,
Locust, Honey Locust,
Maple (Rock Maple, Hard Maple or Sugar Tree, Black Sugar Maple, Red Maple, White Silver Maple),
Red Mulberry,
Oak (White Oak, Red Oak, Black Oak, Chestnut Oak, Scarlet Oak, Spanish Oak, Pin Oak, Post or Yellow Oak, Laurel Oak),
Sassafras,
Sour Wood,
Sycamore,
Tulip Tree or Poplar,
Walnut (Black Walnut, White Walnut or Butternut),
Wild Cherry.

THE EVERGREEN FOREST TREES.

Pines (White Pine, Yellow Pine, Pitch Pine),
Spruce (Hemlock Spruce, Black Spruce),
Cedar.

SMALL TREES AND SHRUBS.

Holly,
Laurel,
Rhododendron
Fringe Tree,
Chinquapin,
Elder,
Red Bud, (Judas Tree).
Spicewood,
Common Sumac,
Staghorn Sumac,
Leatherwood,
Persimmon,
Hazelnut,
White Willow.



In dry weather give the trees plenty to drink.

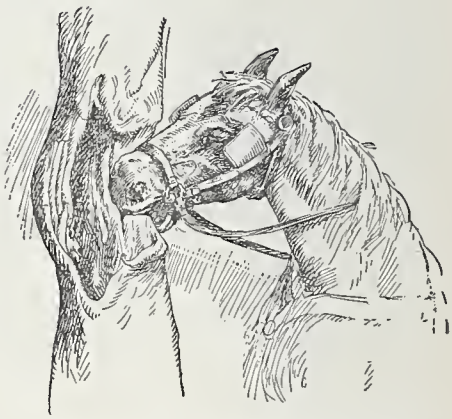
Wounded limbs should be cut off.

Protect the tree till it gets old enough to care for itself.

Save your pennies, and put one of these around your trees.

Loosen up the earth about the roots.

A little sticky paper protects the tree from caterpillars.



Don't let the horse lunch off the trees.

FIRST AID TO TREES.

—Courtesy, "Newark Shade Tree Commission."

BULLETINS AND CIRCULARS ON FORESTRY.

(Note.—Teachers may obtain free copies of the following Bulletins by writing to the Division of Publications, Department of Agriculture, Washington, D. C.)

Forest Planting and Farm Management—Farmers' Bulletin No. 228.

A Primer of Forestry—Part I, Farmers' Bulletin No. 173.

A Primer of Forestry—Part II, Farmers' Bulletin No. 358.

Three Insect Enemies of Shade Trees—Farmers' Bulletin No. 99.

Trees of the United States Important in Forestry—Reprint from Yearbook, Department of Agriculture, for 1897.

Insect Injuries to Forest Products—Reprint from Yearbook, 1904.

How to Grow Young Trees for Forest Planting—Reprint from Yearbook, 1905.

Insect Enemies of Forest Production—Reprint from Yearbook, 1905.

National Forests and the Lumber Supply—Reprint from Yearbook, 1906.

Diseases of Ornamental Trees—Reprint from Yearbook, 1907.

Forestry and the Lumber Supply—Forest Service, Circular No. 25.

How to Plant Trees—Forest Service, Circular No. 61. Revised Edition.

Arbor Day—Forest Service, Circular No. 96.

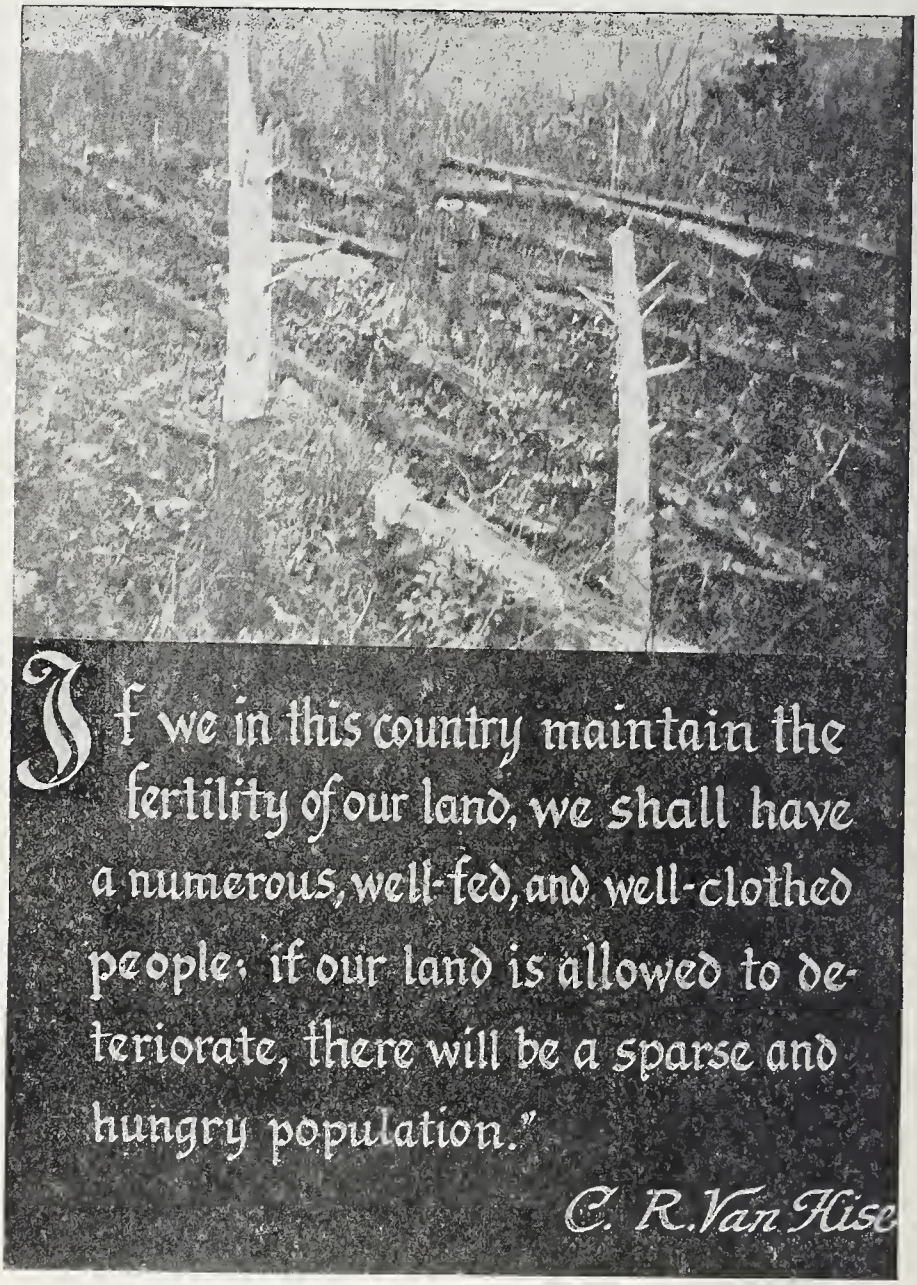
The Status of Forestry in the United States—Forest Service Circular No. 167.

Tree Planting on Rural School Grounds—Farmers' Bulletin No. 134.

The Forest Service—Circular No. 36.

Progress of Forestry in 1907—Reprint from Appendix, Yearbook of Department of Agriculture for 1907.

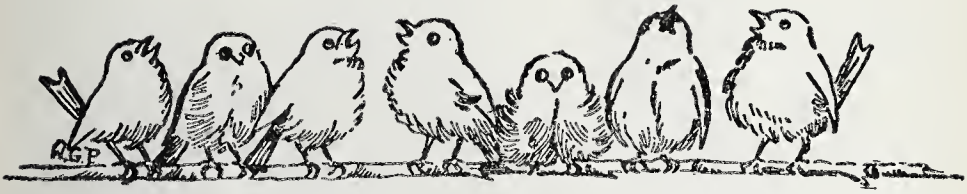
White Oak in Southern Appalachians.—Cir. 105.



Courtesy of C. C. and C. L. D. of the Presbyterian Church.

BIRDS

Chas. A. Babcock, Founder of Bird Day.



HISTORY OF BIRD DAY.

In May, 1894, the first Bird Day in America was celebrated by the school children of Oil City, Pa. Chas. A. Babcock, whose picture appears on the opposite page, was then superintendent of the city schools, and to him is given the honor of starting the observance of this Day.

He has always been and is yet a great lover of nature and especially of bird life, so he conceived the plan of having his boys and girls write stories of how birds live, what they eat and how they build their nests. His pupils became so much interested and so skillful in their observations that Mr. Babcock decided to set aside a special day in his schools each year for the study of this one thing. J. Sterling Morton, who, as you remember, is the founder of Arbor Day, was very much interested in birds too, so while he was still Secretary of the Department of Agriculture, he wrote Mr. Babcock urging him to start a nation wide campaign for the celebration of Bird Day in the schools.

This was less than twenty years ago, yet this day is now observed in nearly every state in the Union. Already, in several states efficient laws have been passed for the protection of song birds and many thousands of children have learned to protect not only the song birds, but also the larger ones which have proved themselves so valuable as destroyers of insects and worms.

Mr. Babcock is still very much interested in Bird Day and wants every boy and girl to learn how to protect these wonderful little friends of the farmer and the forester. I feel sure that you could do nothing that would please him more than to send him a little report of what you did on Arbor and Bird Day in your school.

MY NEIGHBOR.

I have a new neighbor just over the way,
She was moving in on the first of May;
When she took in her household goods, I saw
They were nothing but rubbish and sticks and straw;
But when I made her a call just now
I found she had furnished her house somehow
All trim and tidy and nice and neat,
The prettiest cottage in all the street.
Of thistledown was her carpet fine,
A thousand times better and softer than mine;
Her curtains, to shut out the heat and light,
Were woven of blossoms pink and white;
And the dainty roof of her tiny home
Was a broad green leaf like an emerald dome.
'Tis the cosiest nook that you ever did see,
Mrs. Yellowbird's house in the apple tree.

—Youth's Companion.

THE FIRST BLUEBIRD.

Jest rain and snow! and rain again!
  And dribble! drip! and blow!
Then snow, and thaw! and slush! and then
  Some more rain and snow!

This morning I was 'most afeared
  To wake up—when, I jing!
I seen the sun shine out and heerd
  The first bluebird of spring!—
Mother she'd raised the winder some—
And in acrost the orchurd come,
  Soft as an angel's wing,
A breezy, treesy, beesy hum,
  Too sweet for anything!

The winter's shroud was rent apart—
  The sun burst forth in glee,—
And when that bluebird sung, my heart
  Hopped out of bed with me!

—*James Whitcomb Riley.*

MY RENTERS—THE WRENS.

I had a most congenial neighbor last summer, who with his family—a wife and four children—occupied a small apartment in one of my peach trees. My terms were: good-will and companionship, to be paid daily.

The apartment was considered first by chickadees; a pair took

THE SMALL APARTMENT.

MY RENTERS.

MRS. WREN.

THE OLDEST SON ABOUT READY TO BREAK HOME TIES.

AN INTERESTING BIRD STUDY.

an option in March, but after three days of thinking the matter over, left without explanation. Next a male bluebird called; that was the last of March. He was delighted with the place, and brought his mate the next day; but she turned it down on first inspection, and when I tell you that I regretted her decision, I am stating it mildly. Next Bewick wrens came, and no doubt would have stayed; but a pair of English sparrows had by this time decided to occupy the place. The fight was an unequal one, and the wrens withdrew and left. This I also regretted; but the next day we heard the clear, saucy, unmistakable clatter, sometimes called a song, of a little cock house wren. He had just arrived, had seen my apartment, and was proclaiming to all the neighborhood that he had taken it. The English sparrows immediately resented his proclamation, and for days camped upon his trail and persecuted him; but he had set his heart upon my apartment and would not quit. Neither would he check his loud, saucy song. The sparrows could drive him from limb to limb and from tree to tree, yet he would serenely turn up at the door of his chosen home and, like the emotional opera performers, sing defiance to his enemies. This continued for days; but there was an occasional armistice when this little sprite of optimism and pugnacity sang love-songs to his tardy mate. On proper occasion I made war against his enemies, with the result that he was left in undisputed possession of his chosen home. When he had no more fighting, he sang almost incessantly, stopping occasionally, however, to take in material for the proper furnishing of his new home. He courageously waited and sang and scolded and fought for two weeks, when his mate arrived from the South. She approved of his choice, and housekeeping affairs began without delay.

I can safely say that he did nothing to help build the nest, except to praise, compliment, and encourage his mate; but when there were young birds to feed he set to in earnest, but never failed to make a big announcement of his arrival with food.

Four vigorous young wrens were hatched and reared, and flew away with no unsteady wing from that apartment, which was but four and a half feet from the ground, in a small peach tree in a neighborhood full of cats. A band of sticky tanglefoot about the tree saved the birds from these enemies.

In accommodating this family of wrens I not only received my rental of good-will and cheerfulness, but did my garden and my neighbor's garden a distinct service in the reduction of insects; for

a wren's food is wholly animal; bugs, worms, spiders, beetles, grasshoppers. They eat 'em raw, and never stop to Fletcherize. When the young wrens were "living to eat", the four consumed insects at the rate of about one a minute, from early to late.

—Courtesy Nature and Culture.

THE SONGS AND CALLS OF BIRDS.

By EARL A. BROOKS.

(Written especially for this Manual.)

BIRDS have a mission of song and cheerfulness that few of us realize. Perhaps, subconsciously, the joy of their singing comes to us every day, and, it may be consciously, we are, now and then, permitted to enter into the cheerfulness, the hope and the worship of their songs. I doubt not that to all of us the birds bring an unrealized happiness on every day of sunshine and song, and I am sure that to some of us they bring a realized happiness that ranks among the higher emotions of the soul. The full influence of the songs and calls of birds may be realized in two ways—negatively, when on some mid-summer day the birds are songless and all nature seems to be in quiet repose, and positively, when on some spring morning woods, fields, trees, shrubbery and every place where a bird may be found are resonant, echoing, and joyously musical with the songs of a great avian choir.

Dr. H. H. Horne says, "It would marvellously surprise any of us to have the consciousness of the naturalist for five minutes in the midst of the wood." No doubt this is true. I am sure it would surprise any of us were our ears opened for only a little while to hear the great variety of the songs and calls, the scolding and warning cries, the love notes and the rhapsodies of the bird world. These songsters have in their repertoire such musical numbers as the honk of the Canada Goose, the lisping note of the Ruby-throated Hummingbird, the raucous croak of the Night Heron, the piercing whistle of the Broad-winged Hawk, the cheerful "o-ka-lee" of the Red-winged Blackbird, the unrivaled medley of sweet notes that come from the throat of Bachman's Sparrow, the pleasant variety of chirps, songs and calls of the Chewink, the almost human pathos and tenderness of the whistle of the Wood

SONG SPARROW

Order—PASSERES
Genus—MELOSPIZA
Family—FRINGILLIDÆ
Subspecies—CINEXEA MELODIA

Courtesy of National Association of Audubon Societies

Pewee Fly-catcher, the hoot and screech of the owls and the mournful song of the Whip-poor-will at night, the exquisitely wild and woodsy song of the Louisiana Water-Thrush, the chatter of the Chimney Swift, and the warble of the Bluebird. Of the songs of the thrushes none can speak better than John Burroughs. He says of the Hermit Thrush: "The cast of its song is very much like that of the wood-thrush, and a good observer might easily confound the two. But hear them together and the difference is quite marked; the song of the hermit is in a higher key, and is more wild and ethereal. His instrument is a silver horn which he winds in the most solitary places. The song of the wood-thrush is more golden and leisurely. Its tone comes near to that of some rare stringed instrument. One feels that perhaps the wood-thrush has more compass and power, if he would only let himself out, but on the whole he comes a little short of the pure, serene, hymn-like strain of the hermit." Then, too, there are many other voices to be heard. The Vireos and Warblers in the woods; the Sparrows and Larks in the fields; the Cuckoos and Orioles in the orchards. Nor must we forget the birds that sing even in mid-winter. The other morning, when the mercury was below zero, I saw a Song Sparrow singing by the river bank, and as I am writing this sentence, though the ground is covered with snow and the cold wave has been long and severe, a Carolina Wren is singing as if the weather and all things else were exactly to his liking. These birds that sing in winter have a wholesome optimism that is good for all of us.

The night songs and the aerial songs of birds have an interesting place in our study. The Cuckoos, the Field Sparrow, the Wood Pewee, and many other birds sing occasionally at night. In migration season, the chirps and call notes of many birds may be heard at night as they fly far overhead winging their way from one clime to another. The most noticeable flight-songs are those of the Yellow-breasted Chat, the Indigo Bird, the American Woodcock, the Louisiana Water-Thrush, and the Ovenbird. The American Goldfinches frequently sing in the air as the large flocks of these gay birds in lemon, black, white and green pass in undulating flight from tree to tree.

Many pages might be written, in a general way, on the songs and calls of birds. But, perhaps, I can accomplish my purpose in a better way by telling of some experiences with the songs of birds.

One dreary March day, when the tedium of dormitory and long

years and many books and little real life rested heavily upon me, I went for a breath of fresh air to a little park near which I sojourned. As I stood for a little while, trying to get back to nature and to breathe in the things that are unseen and eternal, a bird song came from somewhere near by. It proved to be one of those elusive songs that are hard to locate. But presently I saw the obscure singer, almost black against the darkened ground, and he sang as if joy would break his little heart. This bird was a Prairie Horned Lark. Before most of the birds have come from the south, this species is busy with its love-making and nest building, and its song is one of the first to be heard in the spring. This song is peculiarly soft and tender and there is in it a sure prophecy of coming spring. At least it seems so to me, and the particular song that I heard on that cold March day seemed to tell of better and brighter days to come. I know I took the message to heart and went back, to work a little longer and a little more joyously in preparation for the tasks of life that were yet to come and are now here.

On another March day, as I returned hastening and homesick from teaching my first country school, a Bluebird flew to the top-rail of a fence along the road, and sang as only a Bluebird can sing.

"Have you listened to the carol of the bluebird in the spring?
Has her gush of molten melody been not poured forth in vain?
Ah! then the pulse has quickened, and a sigh, perhaps, has risen,
From the breast the bluebird's music stirs to thoughts that lack expression—
So tender, so tumultuous are the fancies thus aroused.

* * * * * * * * * *

This song of wondrous gladness, ever bubbling, welling, gushing,
From a fountain full of promise, inexhaustible, divine."

Surely the birds have a mission of song and cheerfulness. This Bluebird came out of the unknown into my life and helped me. Its song became a call to thought and service and worship. If you want to know the power of the Bluebird's song and to translate its meaning for your own soul, read the last chapter in Gene Stratton Porter's "The Harvester." Maurice Thompson said of the Bluebird's song: "His fragments are divine, suggesting a reserve of something too sweet and fine for the common winds to bear."

In these days we fail to cultivate the esthetic. In the songs of

Courtesy State Board of Agriculture.

NEST OF CHESTNUT-SIDED WARBLERS, SHOWING YOUNG BIRDS.

Courtesy Illinois Arbor and Bird Day.

BLUE JAY AND NEST.

birds and in nature's other music and pictures and visions there is the very best material for the cultivation of those tastes without which our lives are barren and dead. The simple plea I make in closing this article is that teachers and pupils alike may go out under the trees sometimes and into the fields and forests and listen —really listen to the songs and calls of the birds.

QUEER NEIGHBORS.

To the corner of our street came a newly wedded pair;
She had feathers in her hat, he was gay and debonair.
Underneath the maple shade, where the shadows play and dance,
There they chose their bridal home (I was looking on by chance).

Peeping through the lowered blind, I was quiet as a mouse,
While I watched the cottage built—'twas a pretty rustic house.
Then I saw them moving in. First a carpet soft was spread;
Then—and this was all they had—just a downy feather bed.

Such an oddly furnished house for the sunny month of June.
Not a change of raiment theirs; not a plate, or cup, or spoon,
Not a cupboard did they bring; not a table or a chair;
And I wondered much to see the contentment of the pair.

Though I never saw him read, yet he told her all the news;
Though she never stirred from home, yet she never had "the blues;"
Though she never did a "wash," they were always trim and neat;
Though she never cooked a meal, they had always food to eat.

How they managed thus to live was a mystery to me.
Long I wondered, but at last I determined I would see;
So I ventured to their door, but they fled with fear intense;
For the *birds* are keeping house in a corner of the fence.

—*Elizabeth Rosser, in "Youth's Instructor."*

THE NORTH STORY OF HOW THE ROBIN GOT ITS RED BREAST.

(Let some child tell this story.)

Long ago, in the far north, where it is very cold, there was only one fire.

An old man and his little son took care of this fire and kept it burning day and night. They knew that if the fire went out all the people would freeze and the white bear would have the north land all to himself.

One day the old man became very ill, so that his son had everything to do. For many days and nights the boy bravely took care

of his father and kept the fire burning. At last he got so tired and sleepy that he could no longer walk.

Now, the white bear was always watching the fire.

He longed for the time when he should have the northland all to himself.

When he saw how tired and sleepy the little boy was, he stayed close to the fire and laughed to himself.

One night the poor little boy could keep awake no longer and fell fast asleep.

Then the white bear ran as fast as he could and jumped upon the fire with his wet feet and rolled upon it.

At last he thought it was all out and went happily away to his cave.

But a gray robin had been flying near and had seen what the white bear was doing.

She waited until the bear had gone away.

Then she flew down and searched with her sharp little eyes until she found a tiny live spark.

For a long time she patiently fanned this little spark with her wings.

Her little breast was scorched red, but she did not give up.

After a while a fine, red blaze sprang up. Then she flew away to every hut in the northland.

Everwhere that she touched the ground a fire began to burn.

So that soon instead of one little fire, the whole northland was lighted up.

Now, all that the white bear could do was to go back further into his cave and growl.

For now, indeed, he knew that the northland was not all for him.

And this is the reason why the people in the north country love the robin. And they are never tired of telling their children how it got its red breast. —*Flora Cook's Myths.*

LOST—THREE LITTLE ROBINS.

Oh, where is the boy, dressed in jacket of gray,
Who climbed up a tree in the orchard today
And carried my three little birdies away?
They hardly were dressed,
When he took from the nest
My three little robins and left me distressed.

ROBIN

Order—Passeres | Family—Turdidæ

Genus—Planesticus | Species—Migratorius

Courtesy of National Association of Audubon Societies

O wrens! have you seen, in your travels today,
A very small boy, dressed in jacket of gray,
Who carried my three little robins away?
He had light colored hair,
And his feet were both bare,
And he was most cruel to me, I declare.

O butterfly! stop just one moment, I pray;
Have you seen a boy dressed in jacket of gray,
Who carried my three little birdies away?
From his pretty blue eyes
One might think he was wise,
But he must be wicked for one of his size.

O boy with blue eyes, dressed in jacket of gray!
If you will bring back my three robins today,
With sweetest of music the gift I'll repay;
I'll sing all day long
My merriest song,
And I will forgive you this terrible wrong.

Bobolink! Did you see my birdies and me,
How happy we were on the old apple tree,
Until I was robbed of my young as you see?
Oh, how can I sing,
Unless he will bring
My three robins back, to sleep under my wing?

—*Lincoln Literary Collection.*

THE BOY AND THE ROBIN.

Once a sweet boy sat and swung on a limb;
On the ground stood a little bird looking at him.
Now the boy he was good, but the robin was bad,
So he shied a big stone at the head of the lad,
And it killed the poor boy, and the robin was glad,

Then the little boy's mother flew over the trees—
"Tell me, where is my little boy, robin-bird, please?"
"He is safe in my pocket," the robin-bird said,
And another stone shied at the fond mother's head,
And she fell at the feet of the wicked bird, dead.

You imagine, no doubt, that the tale I have mixed,
But it wasn't by me that the story was fixed;
'Twas a dream a boy had after killing a bird,
And he dreamed it so loud that I heard every word,
And I jotted it down as it really occurred.

—Adapted from "Good Words."

HOW THE WOODPECKER KNOWS.

How does he know where to dig his hole,
The woodpecker, there on the elm-tree bole?
How does he know what kind of a limb
To use for a drum, and to burrow in?
How does he find where the young grubs grow—
I'd like to know?

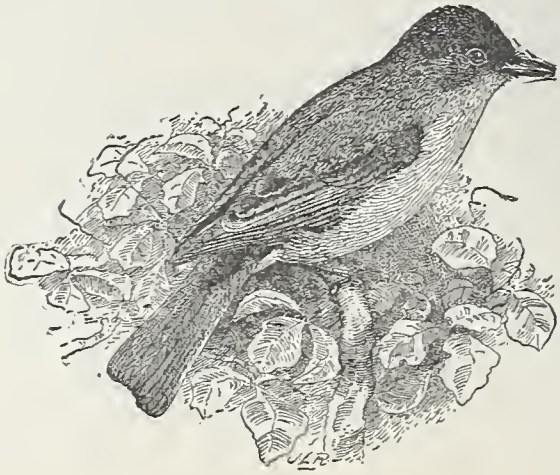
The woodpecker flew to a maple limb,
And drummed a tattoo that was fun for him,
"No breakfast here! It's too hard for that,"
He said, as down on his tail he sat,
"Just listen to this: rrrr rat-tat-tat."

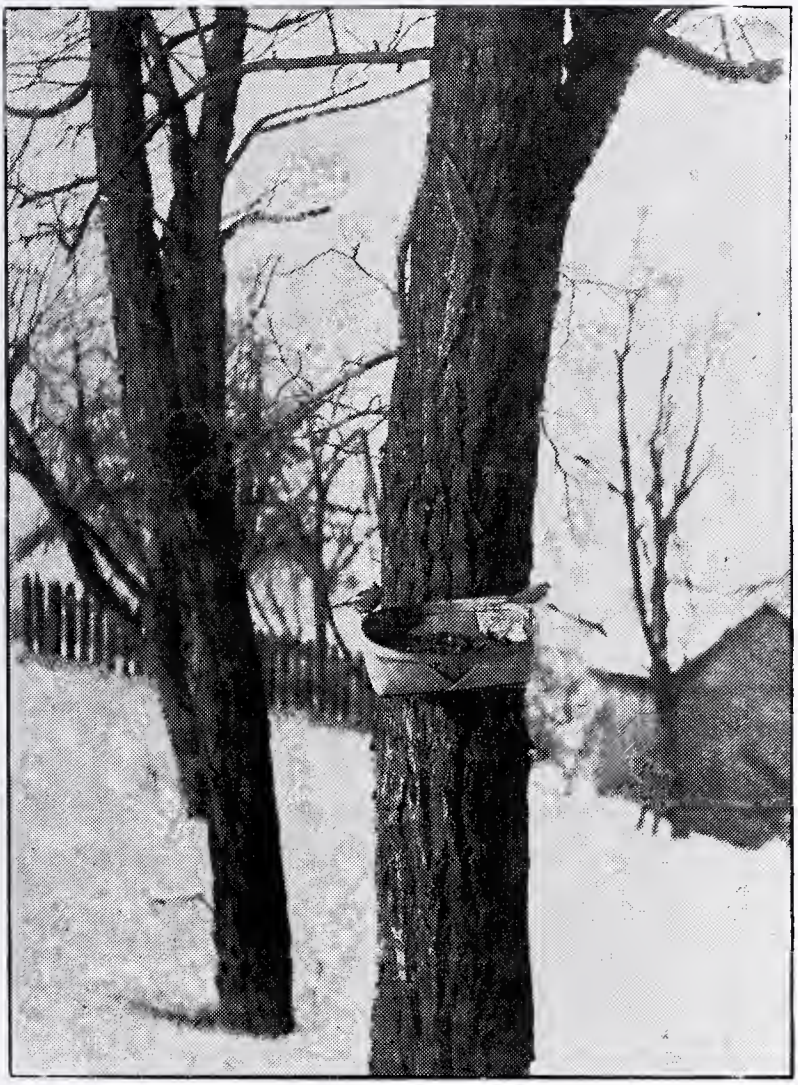
Away to the pear tree, out of sight,
With the cheery call and a jumping flight,
He hopped around till he found a stub,
"Ah, here's the place to look for a grub.
"Tis moist and dead—rrrr rub-dub-dub."

To a branch of the apple, Downy hied,
And hung by his toes to the under side,
" 'Twill be sunny here in this hollow trunk;
It's dry and soft, with a heart of punk,
Just the place for a nest—rrrr runk-tunk-tunk."

"I see," said the boy. "Just a tap or two,
Then listen as any bright boy might do;
You can tell ripe melons and garden stuff
In the very same way—it's easy enough."

—*William J. Long.*





Photograph by F. E. Brooks.

FEEDING BIRDS IN WINTER—TUFTED TITMOUSE ON BASKET.

OUR FRIENDS—THE BIRDS.

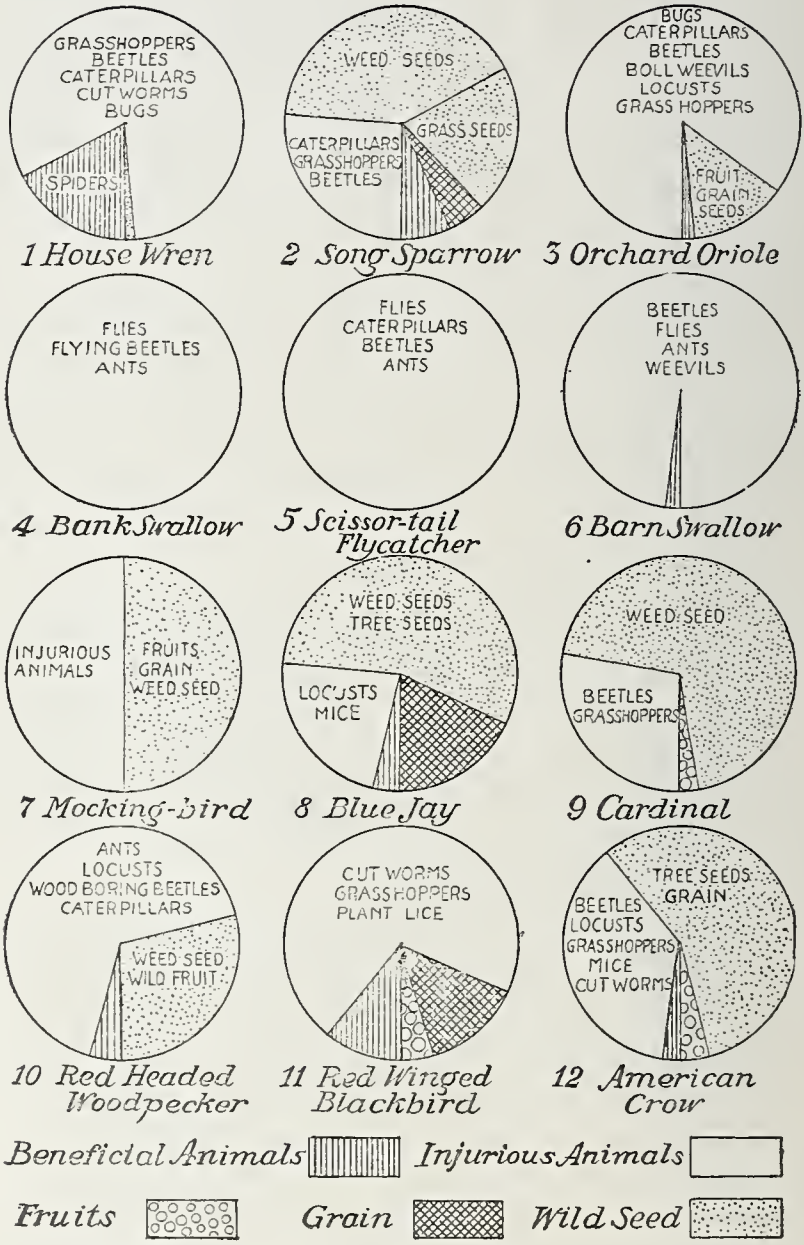
How many farmers realize that they are eating one of their very best friends when they sit down to a meal of quail-on-toast! Indeed, nearly every native bird, with the possible exception of the crow, is a staunch worker for the farmer and the orchardist. It is not the purpose of this short article to go into the detailed study of the economic value of the many birds to be found on the farms and in the forests of West Virginia; but rather to give one or two illustrations which I hope will cause the thoughtless boy and would-be hunter to pause and think.

For every destructive insect or beetle there seems to be a bird whose special delight is to search it out and destroy it. The woodpecker has a special chisel-like bill for cutting into the bark of trees in search of borers. Insects that fly are taken on the wing by warblers and fly-catchers. Those that live on the leaves and buds are hunted by a host of birds such as orioles, tanagers, cuckoos and thrushes. Even the owl and the hawk catch many more mice and young rabbits than they do chickens.

It has been estimated that there are probably a million different species of insects in the United States. If the birds were destroyed, these insects would soon become so very numerous that they would eat up every green leaf and flower. A single borer may kill a tree, yet a woodpecker has been known to kill as many as three hundred borers in a day. A cuckoo will sometimes eat as many as four hundred caterpillars a day, while a chickadee can easily digest one thousand insect eggs for breakfast.

A few birds such as the blackbird and the partridge, sometimes eat a little wheat or scratch up a few grains of corn in the spring, but they do so much more good than harm that the farmer can well afford to pay them their little pittance. Even as early as 1753, Benjamin Franklin wrote to a friend;— "In New England they once thought blackbirds useless, and mischievous to the corn. They made efforts to destroy them. The consequence was, the blackbirds diminished, but a kind of worm which devoured the grass (the cut-worm), and which the blackbirds used to feed upon, increased prodigiously; then, finding their loss in grass greater than their gain in corn, they wished again for the blackbirds."

If you will study the diagrams accompanying this article, you will be able to determine for yourself the birds that are the most useful to the farmer and the forester. Even the crow which is


GRASSHOPPERS
BEETLES
CATERPILLARS
CUT WORMS
BUGS
SPIDERS
1 House Wren
WEED SEEDS
GRASS SEEDS
CATERPILLARS
GRASSHOPPERS
BEETLES
2 Song Sparrow
BUGS
CATERPILLARS
BEETLES
BOLL WEEVILS
LOCUSTS
GRASS HOPPERS
FRUIT
GRAIN
SEEDS
3 Orchard Oriole
FLIES
FLYING BEETLES
ANTS
4 Bank Swallow
FLIES
CATERPILLARS
BEETLES
ANTS
5 Scissor-tail Flycatcher
BEETLES
FLIES
ANTS
WEEVILS
6 Barn Swallow
INJURIOUS ANIMALS
FRUITS
GRAIN
WEED SEED
7 Mocking-bird
WEED SEEDS
TREE SEEDS
LOCUSTS
MICE
8 Blue Jay
WEED SEED
BEETLES
GRASSHOPPERS
9 Cardinal
ANTS
LOCUSTS
WOOD BORING BEETLES
CATERPILLARS
WEED SEED
WILD FRUIT
10 Red Headed Woodpecker
CUT WORMS
GRASSHOPPERS
PLANT LICE
11 Red Winged Blackbird
TREE SEEDS
GRAIN
BEETLES
LOCUSTS
GRASSHOPPERS
MICE
CUT WORMS
12 American Crow
Beneficial Animals
Injurious Animals
Fruits
Grain
Wild Seed

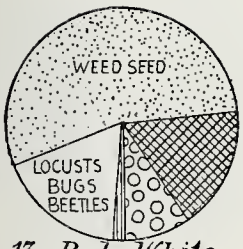
Courtesy Illinois Arbor and Bird Day.

ALMOST READY TO FLY.

Photograph by W. E. Rumsey.

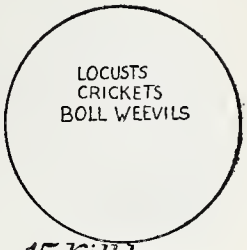
YOUNG ROBIN.

They eat their weight in bugs and worms every day.



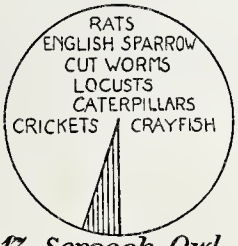
13 Bob White

14 Dove

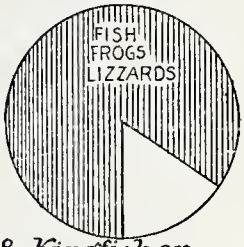


15 Killdeer

16 Barn Owl



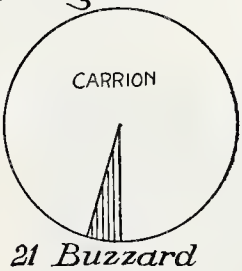
17 Screech Owl



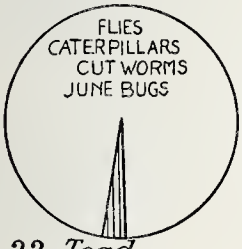
18 Kingfisher

19 Road-Runner

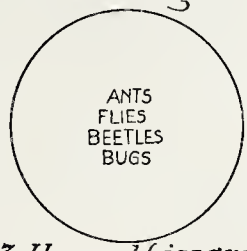
20 Humming Bird



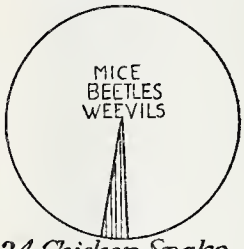
21 Buzzard



22 Toad



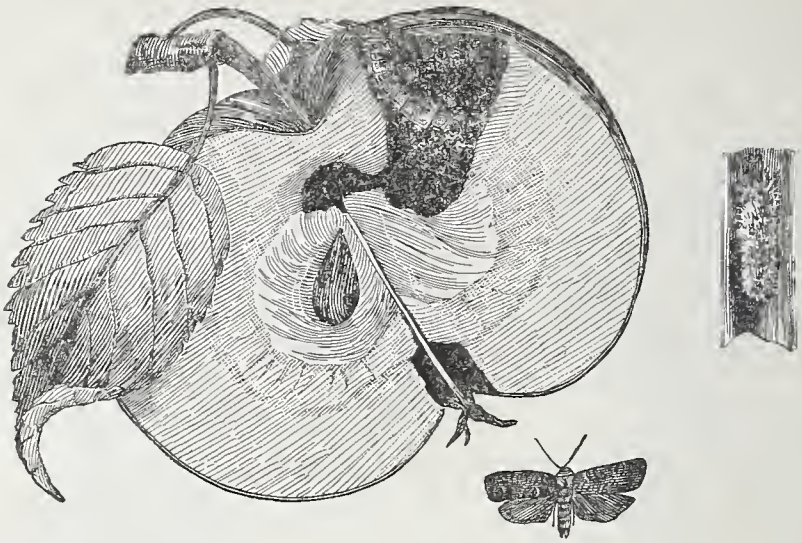
23 Horned Lizzard



24 Chicken Snake

Beneficial Animals Injurious Animals

Fruits Grain Wild Seeds



Section of wormy apple; a, codling moth; b, cocoon.
(From Goff & Mayne's Agriculture, American Book Company.)

driven from every corn field, makes up fully half of his daily menu from beetles, mice and cut-worms. I hope every boy will learn to distinguish between the English sparrow and the song sparrow before he throws his first stone or shoots his first gun. The English sparrow really deserves all that he receives at the hand of the small boy, but the song sparrow is one of the greatest friends that the farmer has. He scarcely touches grain or fruit except when other kinds of food are scarce.

(From Goff & Mayne's Agr.)
Woodpecker hunting for cocoons of codling moth in bark of tree during winter.

The bobwhite is probably the most valuable and at the same time the most hunted of all beneficial birds. He seems to know the different seeds and insects which are of value to the farmer and leaves these alone, but he never tires of filling his crop with rag weed seeds and grasshoppers. He even takes great delight in hunting potato bugs. If the farmer took half the care to protect the patridge that he does to "Paris green" his potato patch, I feel sure that he would get rid of the bug much more quickly and easily.

Doctor Judd has stated that at least fifty different birds act as

weed destroyers and the noxious plants which they help to eradicate number more than three score species. Perhaps if birds were more numerous such problems as the extermination of the Gypsy moth of New England and cotton-boll weevil of the South, which represent an annual loss of millions of dollars, would be simplified. Undoubtedly the increase of injurious insects and the spread of noxious weed seeds are directly due to the destruction of our birds. Even from the financial view point alone it amply pays to protect the birds and encourage their increase. But by so doing we are doubly repaid in song and beauty. Let us study the birds more carefully that we may appreciate them the more fully.

BIRD PROBLEMS.

Suppose that the damage from insects in West Virginia is 15c an acre. How much does this amount to for the whole state?

If there are 9% fewer insects next year because of the increased number of birds, how many dollars will that save the people of West Virginia?

Suppose that there are three birds on every acre and that the average amount of weed seed that each bird eats in one day is ¼ of an ounce. How many tons of weed seed would be consumed each day by the birds of West Virginia?

If it takes 120,000 insects to fill a bushel basket and each bird in West Virginia eats 25 insects a day (a very low estimate), how many bushels would be consumed during the month of June?

FROM "THE BIRDS OF KILLINGWORTH."

"You slay them all! and wherefore? for the gain
  Of a scant handful more or less of wheat,
Or rye, or barley, or some other grain,
  Scratched up at random by industrious feet,
Searching for worm or weevil after rain!
  Or a few cherries, that are not so sweet
As are the songs these uninvited guests
  Sing at their feasts with comfortable breasts.

"Do you ne'er think what wondrous beings these?
  Do you ne'er think who made them, and who taught
The dialect they speak, where melodies
  Alone are the interperters of thought?
Whose household words are songs in many keys,
  Sweeter than instrument of man e'er caught!
Whose habitations in the tree-tops even
  Are half-way houses on the road to heaven!

"Think, every morning when the sun peeps through
  The dim, leaf-latticed windows of the grove,
How jubilant the happy birds renew
  Their old, melodious madrigals of love!
And when you think of this, remember too
  'Tis always morning somewhere, and above
The awakening continents, from shore to shore,
  Somewhere the birds are singing evermore.

"Think of your woods and orchards without birds!
  Of empty nests that cling to boughs and beams
As in an idiot's brain remembered words
  Hang empty 'mid the cobwebs of his dreams!
Will bleat of flocks or bellowing of herds
  Make up for the lost music, when your teams
Drag home the stingy harvests, and no more
  The feathered gleaners follow to your door?
* * * * * * * *

"You call them thieves and pillagers: but know,
  They are the winged wardens of your farms,
Who from the cornfields drive the insidious foe,
  And from your harvests keep a hundred harms."
* * * * * * * *

—*Henry Wadsworth Longfellow.*
—*Printed by Permission of Houghton, Mifflin & Co.*

THE BROKEN WING.

In front of my pew sits a maiden—
  A little brown wing in her hat,
With its touches of tropical azure,
  And the sheen of the sun upon that.

Through the bloom-colored pane shines a glory
  By which the vast shadows are stirred,
But I pine for the spirit and splendor
  That painted the wing of that bird.

The organ rolls down its great anthem
  With the soul of a song it is blent;
But for me, I am sick for the singing
  Of one little song that is spent.

The voice of the curate is gentle:
  "No sparrow shall fall to the ground;"
But the poor broken wing on the bonnet
  Is mocking the merciful sound.
—*Alabama Arbor Day Annual.*

SCARLET TANAGER

1. Adult Male. 2. Adult Male, Changing to Winter Plumage. 3. Adult Female.

Order—Passeres Family—Tanagridæ
Genus—Piranga Species—Erythromelas

WEST VIRGINIA AUDUBON SOCIETY ORGANIZED.

On October 10, 1911, about twenty-five bird-lovers met in the Carnegie Library of Parkersburg, for the purpose of organizing an Audubon Society. A preliminary organization was affected, and a committee was appointed to draft a Constitution and By-Laws.

The meeting then adjourned to October 24, when the following officers were elected:

President.....Miss Ida M. Peters,
Vice-President.....Mrs. W. W. George,
Secretary.....Miss Hattie Alleman,
Treasurer.....Mr. Beauchamp Smith.

The objects of the Society, as given in the constitution are:

(1) To encourage the study of birds, especially to the end that their economic value to mankind shall be understood and appreciated, and to use all lawful means for the protection of wild bird and animal life, and to encourage legislation for this purpose.

(2) To discourage in all ways the traffic in the plumage of wild birds for millinery and decorative purposes.

(3) To discourage the destruction of wild birds, and their nests, and eggs.

(4) To attract the birds about our homes by providing protection, and sustenance.

(5) To labor for the accomplishment of these ends, especially in the State of West Virginia.

The Society has several plans under consideration for furthering bird protection, and for interesting the public in its work. A course of two lectures will be held this Spring, the first by Rev. Earle A. Brooks of this state, and the second by Mr. Henry Oldys of Washington, D. C.

The Society hopes to secure the passage of a bill at the next session of the Legislature, prohibiting the sale of "Aigrettes" in West Virginia. A campaign will soon be started, through the press, to arouse public interest in this cause. The ruthless slaughter and extermination of wild birds, particularly of the egrets, to obtain the plumage for millinery purposes, is an act of great cruelty, and should be stopped by prompt and vigorous legislation. Laws prohibiting the sale as well as the killing of these birds are absolutely necessary to properly proteet them. The states of New York, New Jersey, Louisiana, Ohio, Missouri, Massachusetts, Oregon and California have all passed laws making the sale of these feathers illegal. Will not West Virginia follow the example of her sister states, and

properly protect the wild birds of our country by appropriate legislation?

The West Virginia Audubon Society is trying to make the answer to this question "Yes." Should not every patriotic West Virginian rally to the standard upheld by the Audubon Society, and assist in the passage of this bill?

Several Junior Audubon Societies have been organized by the teachers of Parkersburg, in their school rooms, through the agency of the Audubon Society. All the superintendents, principals and teachers in the schools of West Virginia should be interested in bird study and protection, and should teach their scholars to value and appreciate our birds. Full information in regard to the organization of local societies can be obtained by writing Miss Alleman, Parkersburg, or the National Association of Audubon Societies, 141 Broadway, New York.

GOOD BREEDING, GOOD MANNERS AND GOOD FRIENDS.

MUSIC

ANNIVERSARY CHORAL.

Miss F. E. PETTINGELL. FRANK L. ARMSTRONG.

1. Through the changing sea - sons Of the changing year, With its light and
2. Records past and pres - ent We may now sur - vey, At this pleasant
3. From this fes - tal ser - vice To our work a - new, With a quickened

shad - ow With its hope and fear; Through each glad ful - fil - ment
mile - stone In life's on- ward way:— Knowledge claims new pow - er,
pur - pose Hearts both strong and true:— Fath - er, lead Thy forc - es,

And each sad de - feat, We have safely journeyed And again we meet.
Truth her might ex - tends, 'And the Master know- eth New and loyal friends.
One, u - ni - ted band— Ev- er on to conquest 'Neath their King's command.

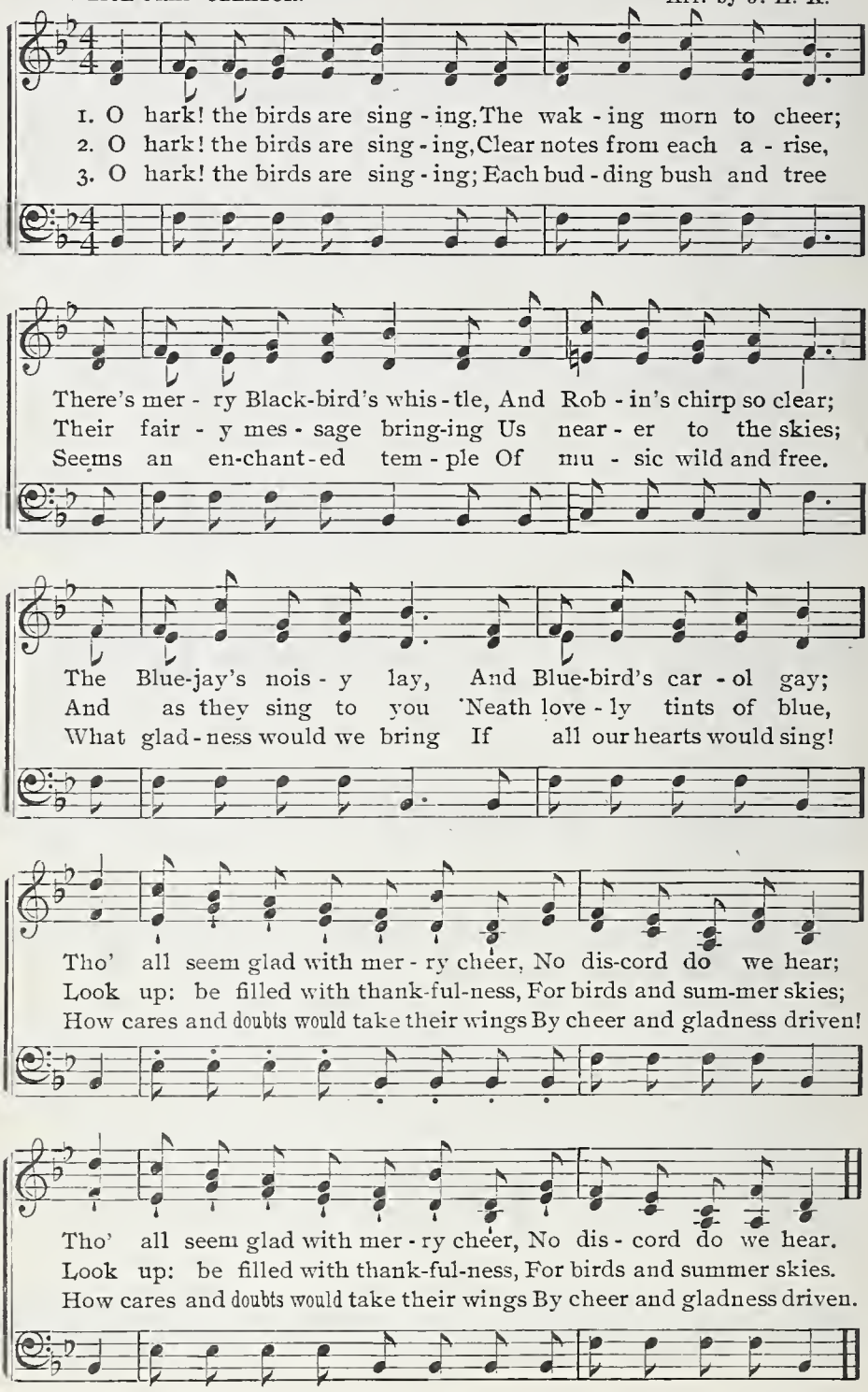
CHORUS, *in unison.*

God hath kind - ly led us Through this chang- ing year,

By His guid - ing prov - i - dence We as - sem - ble here.

316 O Hark! The Birds are Singing.

ALICE JEAN CLEATOR. Arr. by J. H. K.



From American School Songs—Hope Pub. Co.

Tell Me Dear Robin.

LIZZIE DEARMOND. WM. J. POST.

1. Sing lit - tle rob - in up so high, Sing to me
2. Out in this world so bright and fair, Full of its
3. My - ri - ad voic - es float a - round, Sure - ly some

while you swing, Sure - ly some won- drous
light and cheer, Ma - ny a puz - zle
tale they tell, Sing and explain what

things you see, Float - ing on air - y wing.
meets our eyes, You might perhaps make clear.
seems so queer, Rob - in you know it well.

rit.

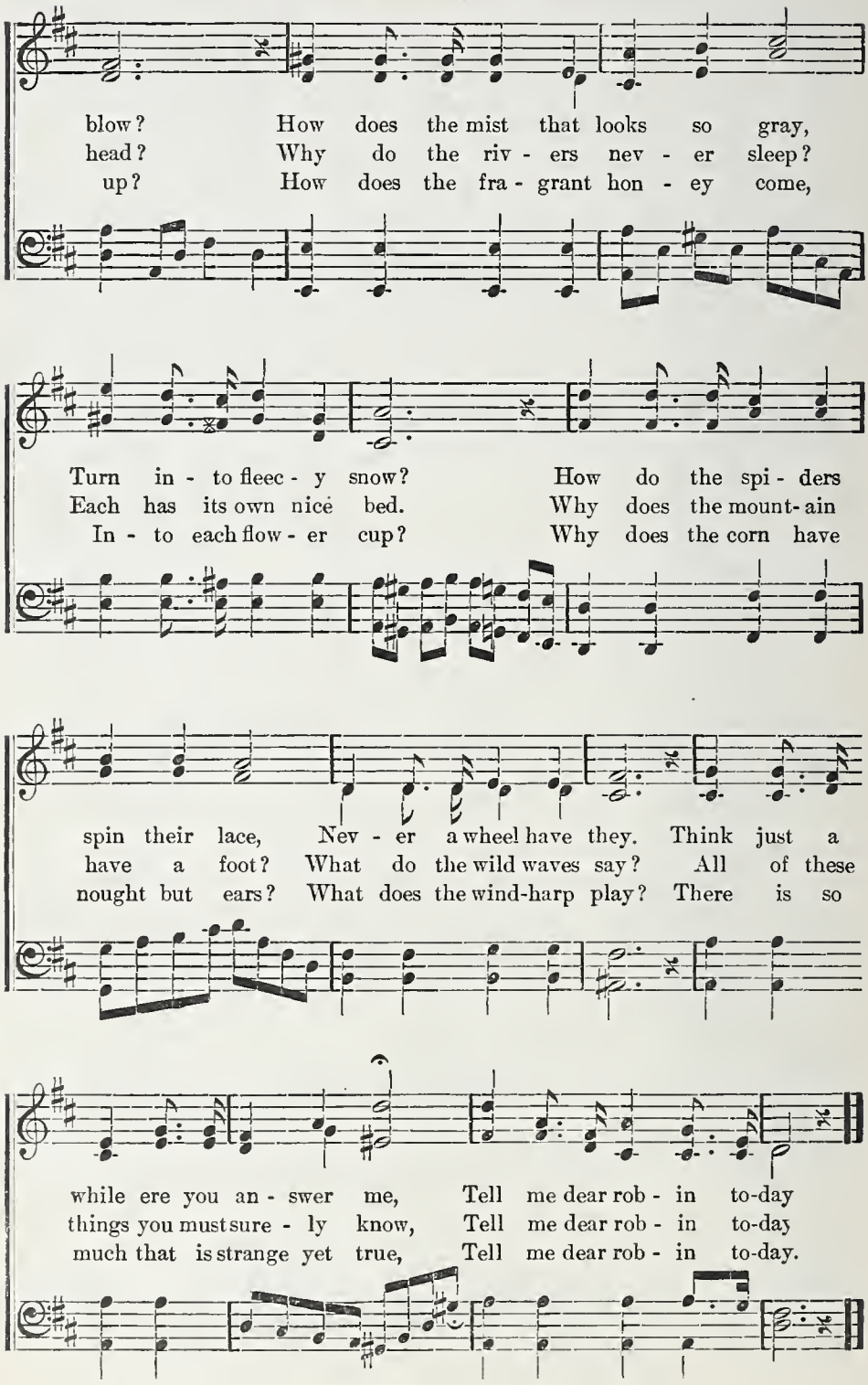
REFRAIN.

Tell me dear rob - in, tell me pray, What does the North wind
Tell me dear rob - in, tell me pray, Where is the fount- ain's
Why do the lit - tle stream - lets run? Why does the grass spring

Copyright, 1910, by Wm. J. Post. Used by permission.

From "Choice Melodies," by Standard Company, Publishers, Baltimore, Md.

Tell Me Dear Robin.—Concluded.



349 Hear the Rain-drops Falling.

CHAS. H. GABRIEL.

1. Hear the tap, tap, tap-ping of the rain - drops dropping On the
2. Hear the tap, tap, tap-ping of the rain - drops dropping On the

win - dow ask-ing, "Let us in?" And I know these showers are the
roof when all is hushed to rest; It is mu - sic sweetest, most con-

lov - ers of the flow-ers, In the vale where you and I have been.
sol - ing, and com-plet-est—Like the love and friendship we hold best.

And I know these showers are the lov-ers of the bow-ers. In the
It is mu - sic sweetest, most con-sol-ing and com-plet-est, Like the

CHORUS.

vale where you and I have been. With a soft, soft pat - ter, And a
love and friendship we hold best.

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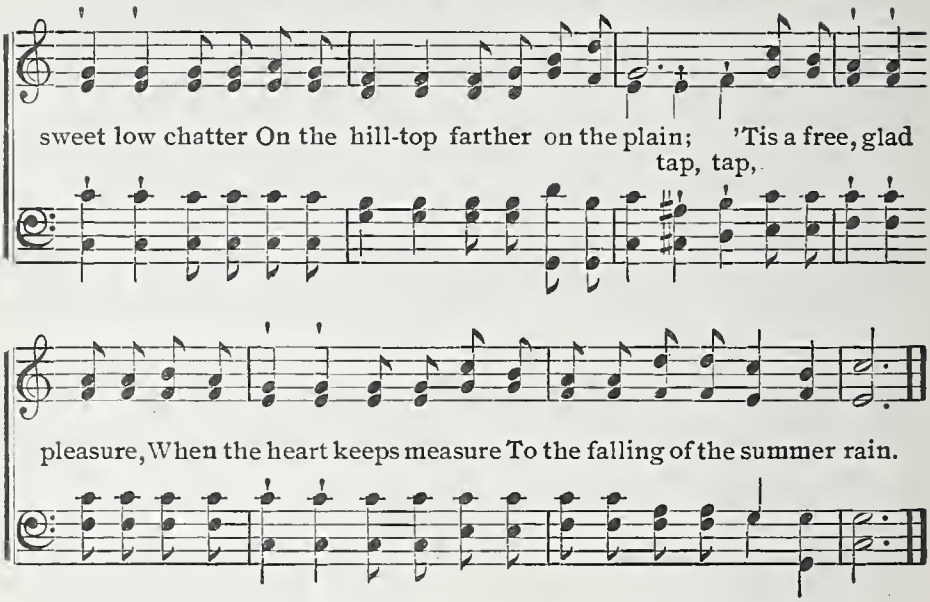
—Taken from Amer. School Songs.

Hear the Rain-drops Falling.



SONG—ARBOR DAY.

(Air: "My Maryland.")

Again we come this day to greet,
  Arbor Day, sweet Arbor Day,
With willing hands and nimble feet,
  Arbor Day, sweet Arbor Day.
No sweeter theme our time can claim,
No grander deed points us to fame,
No day more proud than this we name,
  Arbor Day, dear Arbor Day.

Bring forth the trees. Prepare the earth
For Arbor Day, sweet Arbor Day.
With song we celebrate the birth
  Of Arbor Day, sweet Arbor Day.
And when our joyful task is done,
And we our meed of praise have won,
The glorious work's but just begun,
  For Arbor Day, dear Arbor Day.

—*Words by Seymore S. Short.*

AMERICA.

My country, 'tis of thee,
Sweet land of Liberty,
  Of thee I sing:
Land where my fathers died,
Land of the pilgrims' pride,
From every mountain side,
  Let freedom ring.

My native country, thee—
Land of the noble, free—
  Thy name I love:
I love thy rocks and rills,
Thy woods and templed hills;
My heart with rapture thrills
  Like that above.

Let music swell the breeze,
And ring from all the trees
  Sweet freedom's song!
Let mortal tongues awake;
Let all that breathe partake;
Let rocks the silence break,—
  The sound prolong.

Our father's God! to Thee,
Author of liberty,
  To Thee we sing:
Long may our land be bright
With freedom's holy light;
Protect us by Thy might,
  Great God, our King!

THE GRAND OLD TREES.

Tune—"There's Music in the Air."

We love the grand old trees,
  With the Oak, their royal King,
And the Maple, forest Queen,
  We to her our homage bring;
And the elm with stately form,
Long withstanding wind and storm,
Pine, low whispering to the breeze,
O, we love the grand old trees!

We love the grand old trees,—
  The cedar bright above the snow,
The poplar straight and tall,
  And the willow weeping low.
Butternut and walnut, too,
Hickory so staunch and true,
Basswood, blooming for the bees,
O, we love the grand old trees!

We love the grand old trees,—
  The tulip branching broad and high,
The beech with shining robe,
  And the birch so sweet and shy;
Aged chestnuts, fair to see,
Holly bright with Christmas glee,
Laurel crown for victories,
O, we love the grand old trees!

Courtesy W. Va. Geological Survey.

GOOD ROADS, GOOD FARMS AND GOOD SCHOOLS.

NATURE'S GREETING TO THE BIRDS.

Tune—"*Auld Lang Syne.*"

Nature.

Come, all ye birds from hill and dale,
We'll have a party gay;
Come, Birdies, sing your sweetest songs
On Nature's holiday.

Come, Robin, Bluebird, Thrush and all,
Come, sing your merry lay,
For Nature's keeping carnival
On this, our Arbor Day.

Birds (entering and forming in semi-circle back of Nature),

Dear Mother Nature, we now come,
The Blackbird and the Blue,
With Robin, Oriole and Wren,
And many others, too.

We now salute you, our best friend,
Salute you once again;
Our praises for your loving care
We'll sing in glad refrain.

Nature.

Your praise is very sweet, dear Birds,
And all the summer long
I hope to hear your voices raised
In melody and song.

Birds.

In brightening this dear old world,
We'll strive to do our part:
We'll banish sadness with our song,
And cheer the lonely heart.

We birds are very little folks,
And busy workers, too;
With pleasure we perform the tasks
You've given us to do.

—*From "The Days We Celebrate," by Marie Irish.*

"Go, little book, and wish to all,
Flowers in the garden, meat in the hall;
A living river by the door,
A nightingale in the sycamore."